



Hi Kim,

We have completed the Phase II remediation (exterior walls) on Friday. All the wipe samples passed. We collected three air samples on Friday and sent them to Con-Test Lab in East Longmeadow, MA for analysis. I will e-mail you the air and wipe sample results for review.

I am also submitting an application for remediating the last wall (window W01 through W15) which we could not do in the last phase because of occupancy issue. We are planning to do this when the school closes for summer break when there will no student in the building. This is essentially a repetition of the last application which you have already reviewed and approved and we will follow the same procedures and work practices. I have made the necessary changes and corrections in this application based on your previous review. I will e-mail you the application first followed by the hard copy and a CD for the sample results through overnight mail (this is the same CD that I sent you earlier, please let me know if you do not need it again).

Finally, I will submit a re-sampling plan for the soil for your approval. Once approved, we will collect the samples and remediate the soil, as necessary. That will be last and final phase of the project.

Thanks.

Ashis

Ashis Roychowdhury

Ashis Roychowdhury
Executive Vice President

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EAGLE
Environmental, Inc.

- Industrial Hygiene / IAQ
- Hazardous Building Materials
- Environmental Assessments
- Laboratory Services & Training

June 6, 2011

Ms. Kimberly N. Tisa
U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Congress Street, Suite 1100 (CPT)
Boston, MA 02109-3912

**RE: Self Implementing On Site Cleanup and Disposal Plan – Area III
PCB-Containing Interior/Exterior Window & Soffit Caulk
Bolton High School – 1963 Wing
72 Brandy Street
Bolton, Connecticut
Eagle Project #10-037.11C**

Dear Ms. Tisa:

Eagle Environmental, Inc. (Eagle) is submitting this Self Implementing On-Site Cleanup and Disposal Plan (SIP) for PCB-containing interior/exterior window caulk & soffit caulk IN Work Area III at the above referenced site in accordance with the notification requirement Section 761.61(a) (3) of USEPA Regulation 40 CFR Part 761.

Should you have any questions regarding this plan please contact me at (860) 589-8257 x 209. We are looking forward to your review and approval of this Plan.

Sincerely,
Eagle Environmental, Inc.

Ashis Roychowdhury
Executive Vice President

Cc: Gary Trombley, CT Department of Environmental Protection
Joyce Stille, Town of Bolton

\\Eagle-server\\PUBLIC\\2010 Files\\2010 Specs\\Bolton, Town of\\Bolton HS - PCB Plan (Phase III - Original Bldg).doc



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SELF-IMPLEMENTING ON-SITE CLEANUP AND DISPOSAL
PLAN FOR PCB-CONTAINING INTERIOR/EXTERIOR
WINDOW & SOFFIT CAULK
AREA III

Bolton High School
72 Brandy Street
Bolton, Connecticut

Bolton Public Schools
Bolton, CT

June 6, 2011

EAGLE ENVIRONMENTAL, INC.
531 North Main Street
Bristol, CT 06010

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PROPOSED SELF-IMPLEMENTING ON-SITE CLEAN UP AND DISPOSAL PLAN
PCB-CONTAINING INTERIOR/EXTERIOR WINDOW & SOFFIT CAULK
BOLTON HIGH SCHOOL - 1963 WING – AREA III
72 BRANDY ROAD, BOLTON CONNECTICUT

SECTION 1: INTRODUCTION & BACKGROUND

The Town of Bolton has retained Eagle Environmental Inc. (Eagle) to prepare a plan to comply with the United States Department of Environmental Protection (USEPA) requirements for notification of a Self-Implementing On-Site Cleanup and disposal Plan (SIDP) in accordance with USEPA Regulation 40 CFR 761.61 (a) (3).

During the course of the field investigation phase for hazardous building materials at the Bolton High School, 72 Brandy Road, Bolton Connecticut caulking compounds with concentrations of polychlorinated biphenyl (PCB) in excess of 50 parts-per-million (PPM) were identified at the interior horizontal beam caulk, interior and exterior window frame caulk and exterior soffit caulk located in 1963 Original structure. The first phase of PCB remediation involving remediation of the horizontal beam caulk was conducted in the summer of 2010. The second phase of PCB remediation involving remediation of interior and exterior window frame caulk and exterior soffit caulk located in Areas I & II of 1963 Original Structure as identified in our application dated March 8, 2011 is expected to be completed on June 3, 2011 with the final air clearance sampling underway. The renovation work pertaining to this application will involve removal of the exterior windows and soffit in Area III of the Original structure. This renovation work will require the removal of the regulated unauthorized PCB caulking and substrate materials.

The work of this PCB remediation and disposal project will be undertaken in the following area in the original 1963 section as follows:

Area III: Area III includes the exterior windows and soffit covering Rooms 015 through Room 020 and the main office area (windows W01 through W15). Work will be performed during summer break starting June 24, 2001 when there will be no student in the building. The scope of work will include removal of interior and exterior window frame caulk and exterior soffit caulk as well as removal of all interior CMU block walls and exterior brick walls.

A Site Location Plan is included in attached Diagram 1-1. The building floor plan is included in attached Diagram 2-1 (FP-1) identifying the different sections of the building. The work area covered under this application is identified in attached Work Area Diagram 2-2 (PCB-1).

1.1 Building Description

Bolton High School is a single-story brick clad building approximately 45,000 square foot in size with a flat roof. The original structure was built in 1963 and there were two (2) additions in 1988 and 1993. The building is constructed slab on grade. Window and door systems are constructed of aluminum. The PCB contamination is located at the interior and exterior window frame openings and at the soffit/wall interface in the 1963 Original structure. The existing structure is being gut rehabbed and an addition being added. There were no unauthorized PCB products identified in the 1988 and 1993 additions.

1.2 Project Objectives

The objective of this phase of work is to remove all PCB containing interior/exterior window caulk containing greater than or equal to 50 PPM PCB as "PCB Bulk Product Waste", to remove soffit caulk containing less than 50 PPM of PPM but over 1 PPM of PCB as "PCB Bulk Remediation Waste" and to remove all porous interior concrete blocks and exterior bricks as "PCB Bulk Remediation Waste" to meet the unrestricted use clean-up standard for high-occupancy use structure.

The overall project objective is to remove PCB materials to facilitate complete renovation of the building "as new" in accordance with proposed construction plans as a high occupancy use upon completing the PCB SIDP work.

Refer to Appendix E for the performance specifications to be implemented by the abatement contractor.

1.3 Plan Organization

The SIDP has been organized into the following sections:

Section 1: Introduction & Background

This section includes the project introduction, building description, and project objectives.

Section 2: Site Characterization

The Site Characterization section provides a summary of the sampling performed to delineate the nature and extent of PCB presence as required and in accordance with 40 CFR Part 761.61 (a) (3) (A-C). The section also includes the nature of the contamination including types of materials; a summary of procedures used to sample the source material and adjacent surfaces; and the location and extent of the identified contaminated areas.

Section 3: Remediation Plan

The remediation Plan includes a discussion of how the remedial objectives defined in Section 1.2 shall be met and the remediation approach, clean up levels to be met and the post remediation verification sampling protocols to be utilized. The remediation plan is submitted in accordance with 40 CFR Part 761.61 (a) (3) (D).

Section 4: Schedule and Certification

Under this section, the proposed scheduling for implementing this phase of remediation work and reporting is provided. This section also includes the written certification signed by the owner of the property and other responsible party's responsibilities for the remediation, clean up and disposal in accordance with 40 CFR Part 761.61 (a) (3) (E).

SECTION 2: SITE CHARACTERIZATION

This section provides a summary of the sampling performed to delineate the nature and extent of PCB presence as required and in accordance with 40 CFR Part 761.61 (a) (3) (A-C). The section also includes the nature of the contamination including types of materials; a summary of procedures used to sample contaminated and adjacent surfaces; and the location and extent of the identified contaminated areas.

Sampling was performed on several occasions. The initial site characterization of source materials, such as caulking, was performed by Eagle Environmental, Inc. of Bristol, Connecticut. Testing of adjacent porous surfaces to facilitate development of this SIDP plan was also performed by Eagle Environmental, Inc. Diagrams depicting the sampling locations of source materials and adjacent porous surfaces collected by Eagle Environmental, Inc are included in Diagrams 2-3 and 2-4 respectively (PCB-S-1 through PCB-S-4 & PCB-C-1 through PCB-C- 3 respectively).

2.1 Sample Collection and Analysis

Sampling of Source Material

Sampling of source materials was conducted by Eagle Environmental representatives, James Webb and Chris Liberti. The sampling was performed on several occasions as follows:

January 7, 2009 – 2 Samples
February 10, 2010 – 1 Sample
March 15, 2010 – 1 Sample
June 1, 2010 – 15 Samples

Sampling involved removal of bulk caulking material (source materials) on the windows and soffit using hand tools to submit in bulk form to determine PCB content. Tools utilized to collect samples were properly decontaminated between successive sampling using hexane to avoid cross contamination of samples. Each sample was placed in properly labeled containers and delivered to laboratory under proper chain of custody.

Samples were analyzed at Phoenix Environmental Laboratories, Inc. located in Manchester Connecticut. The analytical method for analysis included Soxhlet extraction method 3540C and analysis method SW846 8082.

The sample numbers, locations, material description and analysis results are summarized in Table 2.1.1 in Appendix A. The summary table, sample results and chain of custody forms are also attached as Appendix A. Diagrams PCB-S-1 through PCB-S-4 identify sample locations.

Core Sampling of Interior Substrates for Windows

Sampling of interior adjacent porous surfaces (cmu blocks) was conducted by Eagle Environmental representatives, James Webb and Chris Liberti on several occasions as follows:

Course 1:	October 27, 2010 – 36 Samples
Course 2:	November 4, 2010 – 19 Samples
Course 3:	November 5, 2010 – 9 Samples
Course 4:	November 24, 2010 – 8 Samples
Course 5:	December 1, 2010 – 7 Samples
Course 6:	December 17, 2010 – 6 Samples
Course 7:	December 23, 2010 – 4 Samples

Additional Samples

- Opposite Walls: February 8, 2011 – 10 samples

The first set of thirty-six (36) samples was collected on October 27, 2010 from interior cmu block walls at 0-0.5" distance from the caulk (Course 1 at caulk). Eighteen (18) of these samples detected PCB at concentrations above 1 PPM. One (1) sample had a concentration of 0.86 ppm for PCB, therefore, we decided to collect a second course sample for this material.

The subsequent sampling where conducted at the beginning of each half and full blocks. The second set of nineteen (19) samples was collected on November 4, 2010 from interior cmu block walls at the beginning of the second full block (Course 2). The third set of nine (9) samples was collected on November 5, 2010 from interior cmu block walls at the beginning of the next half block (Course 3) and so on. Diagrams PCB-C-1 through PCB-C-3 identifies sample locations.

These samples were collected from the cmu blocks on one end of the representative window within the rooms. Upon detecting PCB concentrations in the substrate on that side of the window, it was decided to collect a set of samples of the first course of blocks from the corresponding side of the other window in the room. For the purpose of this testing ten (10) such samples were collected on February 8, 2011. It was decided to assume the opposite wall also contaminated with PCB if the PCB concentration was above 1 ppm. Samples were also collected of "infill" cmu blocks between the windows. The "infill" CMU blocks consist of a single row of CMU block exposed on the interior and coated with a thin layer of cement on the exterior between two windows of a classroom. These include the following samples from the interior as indicated in Table 2.1.2: 01, 03, 05, 07, 09, 11, 18, 20, 22, 24, 26, 28, & 30 and in drawings PCB-C-1 & PCB-C-3: W01-I1-CB, W03-I1-CB, W05-I1-CB, W07-I1-CB, W09-I1-CB, W11-I1-CB, W18-I1-CB, W20-I1-CB, W22-I1-CB, W24-I1-CB, W26-I1-CB, W28-I1-CB and W30-I1-CB. The samples associated with the exterior cement are the following as identified in Table 2.1.3: 02, 04, 08, 10, 12, 17, 19, 21, 23, 25, 27, 29 & 31 and corresponding samples in drawings PCB-C-1 & PCB-C-3. Samples of the "infill" cmu blocks between the windows did not detect any PCB.

Eagle Environmental conducted sampling of masonry in accordance with EPA "Draft Standard Operating Procedures for Sampling Concrete in Field" (dated December 30, 1997). Sampling involved first complete removal of bulk product materials (source materials) at sampling locations using hand tools. Intent was to ensure complete removal of source material prior to sampling adjacent surfaces. Once removal of the source material was performed, the porous surfaces were cleaned using wire brush and the surface was rinsed with water. The porous surfaces were sampled using a mechanical hammer drill to obtain enough material for analysis. .

All samples collected were transmitted to Phoenix Environmental Laboratories, Inc. of Manchester, CT. The analytical method for analysis included Soxhlet extraction method 3540C and analysis method SW846 8082.

The sample numbers, locations, material description and analysis results are summarized in Table 2.1.2 in Appendix B. The summary table, sample results and chain of custody forms are also attached as Appendix B. Diagrams PCB-C-1 through PCB-C-3 identify sample locations.

Core Sampling of Exterior Substrates for Windows

Sampling of exterior adjacent porous surfaces (bricks) was conducted by Eagle Environmental representative, James Webb on two occasions as follows:

Course 1: October 27, 2010 – 38 Samples
Course 2: November 5, 2010 – 19 Samples

The first set of thirty-eight (38) samples was collected on October 27, 2010 from exterior brick and concrete walls at 0-0.5" distance from the caulk (Course 1 at caulk). Nineteen (19) of these samples detected PCB at concentrations above 1 PPM (brick only, all the concrete samples were "None Detected"). The second set of nineteen (19) samples was collected on November 5, 2010 at the beginning of the next brick. These samples were all analyzed to be "None Detected" for PCB with Reporting Limit (RL) less than 1 ppm; therefore no additional sampling was necessary.

Eagle Environmental conducted sampling of masonry in accordance with EPA "Draft Standard Operating Procedures for Sampling Concrete in Field" (dated December 30, 1997). Sampling involved first complete removal of bulk product materials (source materials) at sampling locations using hand tools. Intent was to ensure complete removal of source material prior to sampling adjacent surfaces. Once removal of the source material was performed, the porous surfaces were cleaned using wire brush and the surface was rinsed with water. The porous surfaces were sampled using a mechanical hammer drill to obtain enough material for analysis.

All samples collected were transmitted to Phoenix Environmental Laboratories, Inc. of Manchester, CT. The analytical method for analysis included Soxhlet extraction method 3540C and analysis method SW846 8082.

The sample numbers, locations, material description and analysis results are summarized in Table 2.1.3 in Appendix C. The summary table, sample results and chain of custody forms are attached as Appendix C. Diagrams PCB-C-1 through PCB-C-3 identify sample locations.

Sampling of Exterior Substrates for Soffit

Sampling of tectum soffit and the brick in contact with the caulk was conducted by Eagle Environmental representative, James Webb, on two occasions as follows:

Course 1: October 26, 2010 – 12 Samples
Course 2: October 28, 2010 – 10 Samples

The samples were collected from tectum panels and brick walls at 0-0.5" distance from the caulk (Course 1 at caulk). These samples were all analyzed to be "None Detected" for PCB with Reporting Limit (RL) less than 1 ppm; therefore no additional sampling was necessary.

Sampling involved first complete removal of bulk product materials (source materials) at sampling locations using hand tools. Intent was to ensure complete removal of source material prior to sampling adjacent surfaces. Once removal of the source material was performed, the porous surfaces were cleaned using wire brush and the surface was rinsed with water. The porous surfaces were sampled using a mechanical hammer drill to obtain enough material for analysis.

All samples collected were transmitted to Phoenix Environmental Laboratories, Inc. of Manchester, CT. The analytical method for analysis included Soxhlet extraction method 3540C and analysis method SW846 8082.

The sample numbers, locations, material description and analysis results are summarized in Table 2.1.4 in Appendix D. The summary table, sample results and chain of custody forms are attached as Appendix D. Diagrams PCB-C-1 through PCB-C-3 identify sample locations.

2.2 Interpretation of Results

The work pertaining to this Notification involves the exterior windows in Rooms 015 through Room 020 (W01 through W12) and the Main Office (W13 through W15). The following is the interpretation of the sample results involving these windows.

2.2.1 Source Material Samples

The concentrations of PCB in interior window frame caulk ranged from 220 PPM (JW06-W01) through 680 PPM. As the PCB concentration exceeded 50 PPM, this source material will be

removed and disposed of as PCB Bulk Product Waste.

The concentrations of PCB in exterior window frame caulk ranged from “None Detected” through 22,000 PPM. As the PCB concentration exceeded 50 PPM, this source material will be removed and disposed of as PCB Bulk Product Waste.

Only one sample of tectum soffit caulk detected PCB (PCB-03). The concentration of PCB in this sample was 7.9 PPM. Therefore, the soffit caulk will be removed and disposed of as PCB Bulk Remediation Waste <50PPM.

2.2.2 Interior Adjacent Porous Materials Samples (Windows)

1st Course (At Caulk)

The concentrations of PCB in the adjacent cmu blocks associated with windows W01 through W12 ranged from “None Detected” to 14.0 PPM. Note results shaded in summary table and in bold in the sample location diagram contain PCBs at 1 PPM or greater. No interior caulk exists on windows W13 through W15.

As the PCB concentration exceeded 1 PPM but was less than 50 PPM, the first course of cmu blocks need to be removed and disposed of as PCB Remediation Waste. The corresponding blocks associated with the other window in the room will also be removed and disposed of as PCB Remediation Waste <50 PPM.

2nd Course

The concentrations of PCB in the cmu blocks associated with windows W01 through W12 ranged from “None Detected” to 4.9 PPM. Note results shaded in summary table and in bold in the sample location diagram contain PCBs at 1 PPM or greater.

As the PCB concentration exceeded 1 PPM but was less than 50 PPM, the second course of cmu blocks also need to be removed and disposed of as PCB Remediation Waste. The corresponding blocks associated with the other window in the room will also be removed as PCB Remediation Waste.

3rd Course

The concentrations of PCB in the cmu blocks associated with windows W01 through W12 ranged from 2.7 PPM through 16.0 PPM. Note results shaded in summary table and in bold in the sample location diagram contain PCBs at 1 PPM or greater.

As the PCB concentration exceeded 1 PPM but was less than 50 PPM, the third course of cmu blocks need to be removed and disposed of as PCB Remediation Waste. The corresponding blocks associated with the other window in the room will also be removed and disposed of as PCB Remediation Waste <50PPM.

4th Course

The concentrations of PCB in the cmu blocks associated with windows W01 through W12 ranged from 8.3 PPM to 10.0 PPM. Note results shaded in summary table and in bold in the sample location diagram contain PCBs at 1 PPM or greater.

As the PCB concentration exceeded 1 PPM but was less than 50 PPM, the fourth course of cmu blocks need to be removed and disposed of as PCB Remediation Waste. The corresponding

blocks associated with the other window in the room will also be removed and disposed of as PCB Remediation Waste <50PPM.

5^h Course

The concentrations of PCB in the cmu blocks associated with windows W01 through W12 ranged from 3.6 PPM to 7.1 PPM. Note results shaded in summary table and in bold in the sample location diagram contain PCBs at 1 PPM or greater.

As the PCB concentration exceeded 1 PPM but was less than 50 PPM, the fifth course of cmu blocks need to be removed and disposed of as PCB Remediation Waste. The corresponding blocks associated with the other window in the room will also be removed and disposed of as PCB Remediation Waste <50PPM.

6^h Course

The concentrations of PCB in the cmu blocks ranged from “None Detected” to 10.0 PPM. Note results shaded in summary table and in bold in the sample location diagram contain PCBs at 1 PPM or greater.

As the PCB concentration exceeded 1 PPM but was less than 50 PPM, the sixth course of cmu blocks need to be removed and disposed of as PCB Remediation Waste. The corresponding blocks associated with the other window in the room will also be removed and disposed of as PCB Remediation Waste <50PPM.

7^h Course

Only two locations within the work area needed to be sampled. The concentration of PCB in one sample was 1.1 PPM and the concentration in the other was 12.0 PPM.

As the PCB concentration exceeded 1 PPM but was less than 50 PPM, the sixth course of cmu blocks need to be removed and disposed of as PCB Remediation Waste <50PPM. The corresponding blocks associated with the other window in the room will also be removed and disposed of as PCB Remediation Waste <50PPM.

2.2.3 Exterior Adjacent Porous Materials Samples (Bricks/Concrete)

1st Course (At Caulk)

The concentrations of PCB in the samples brick/concrete in contact with the caulk associated with windows W01 through W15 ranged from “None Detected” to 3,700 PPM. Note results shaded in summary table and in bold in the sample location diagram contain PCBs at 1 PPM or greater.

As the PCB concentration exceeded 50 PPM, the first course of brick and the layer of concrete need to be removed and disposed of as PCB Remediation Waste ≥ 50 PPM .

2nd Course

The concentrations of PCB in the second course of bricks/concrete in all the samples collected associated with windows W01 through W15 collected were “None Detected” with “Reporting Limit” of the analytical method below 1 ppm.

As the PCB concentration was below 1 PPM, the second course of bricks/concrete technically need not have to be removed and disposed of as PCB Remediation Waste. However, these blocks

will also be removed and disposed of as PCB Remediation Waste <50PPM.

2.2.4 Exterior Adjacent Porous Materials Samples (Soffit)

1st Course (At Caulk)

The concentrations of PCB in the first course of samples of tectum and bricks in contact with the caulk were "None Detected" with "Reporting Limit" of the analytical method below 1 ppm.

As the PCB concentration was below 1 PPM, the tectum panels and the bricks in contact with the caulk need not have to be removed and disposed of as PCB Remediation Waste.

SECTION 3 – REMEDIATION PLAN

The work described in this SIDP shall meet the objectives identified in section 1.2 Project Objectives in accordance with 40 CFR Part 761. The remediation work shall be performed to ensure compliance with EPA Toxic Substance Control Act (TSCA) requirements and protect both public health and the environment. Materials classified as PCB Bulk Product Waste and PCB Remediation Waste shall be properly removed and disposed of in compliance with federal and state regulatory requirements.

The proposed remediation activities to be performed by remediation contractor shall include the following:

1. Site preparation and controls to facilitate remediation of PCBs.
2. Health and Safety in accordance with Occupation Safety and Health Administration (OSHA) requirements.
3. Removal and off-site disposal of PCB caulking materials containing PCB >50 PPM as PCB Bulk Product Waste from all locations identified. Note caulking materials have also been determined to contain asbestos.
4. On-site removal of interior porous concrete blocks walls in all interior rooms within the work area.
5. On site removal of all exterior porous brick/concrete walls.
6. Recordkeeping and distribution as required in accordance with 40 CFR part 761.125 (c) (5).

Remediation activities to be performed by others shall include the following:

1. Monitoring remediation activities as Owner's representative shall be performed by Eagle Environmental, Inc.
2. Collection of verification samples in accordance with sub-parts P and O of 40 CFR Part 761 for PCB analysis shall be performed by Eagle Environmental, Inc.
3. Building renovation and site restoration shall be performed by Owner's general trade's contractor under separate contract following PCB remediation.

Prior to abatement and remediation activities, site preparation and controls shall be established. PCB Bulk Product Waste containing ≥ 50 PPM of PCB will be removed and transported off-site for disposal at a permitted hazardous waste landfill which is an EPA, TSCA-approved facility. PCB Remediation Waste containing <50 PPM and ≥ 50 PPM of PCB will be transported to a state-approved non-hazardous solid waste disposal facility. PCB Bulk Product Waste shall be

removed and properly disposed of in accordance with 40 CFR Part 761.61. PCB Remediation waste shall be removed in accordance with Self-Implementing On-Site Cleanup and Disposal requirements in accordance with 40 CFR Part 761.61 (a)(5)(i)(B)(2)(ii).

3.1 Site Preparation and Controls

The work shall be performed in accordance with the attached performance based technical specification section included in Appendix E. Prior to initiating PCB Removal the following site controls will be implemented.

- Remediation Contractor shall prepare a Health & Safety Plan (HASP) specific to the site and work activities to be performed (Appendix F). All workers shall follow applicable federal and state regulation with regard to work activities, including but not limited to OSHA regulation including training, personal protection and respiratory protection requirements.
- Work zones shall be established in accordance with technical specification to include abatement zone, decontamination zone and support zone. Work areas will be secured in the following ways:

1. Work during summer break

- For the work covered under this application during Summer break when the school will be closed and there will be no student in the building, the area will be secured by a chain link fence that surrounds the various structures while they are under construction and is locked to prevent unauthorized access. The entire work will be performed using full containment procedure for both the interior and exterior work covering the floor and ceiling surfaces with two (2) layers of 6-mil polyethylene sheeting. Refer to technical specification section and Work Area Diagram PCB-1 for details.
- The building has several distinct wings that allow separation of construction phases/work from occupied portion of the school. To ensure that the work will present no risk to staff occupying other areas, the construction area will be isolated from the rest of the building by hard physical barrier to prevent accidental entry and air exchange. Work will be performed using appropriate engineering control to prevent exposure from the work. Refer to technical specification section and Work Area Diagram PCB-1 for details.
- All other openings in the building interior such as unit ventilation, ducts and grilles shall be securely sealed with a single layer of 6-mil polyethylene sheeting. Refer to technical specification section for requirements.
- The contractor shall establish negative pressure inside the containment with the use of negative air filtration units with HEPA filtration. Refer to technical specification section for requirements.
- Ground protection and isolation barriers shall remain in place throughout work to collect dust and debris resulting from PCB Bulk Product Waste and PCB Bulk Remediation Waste removal. The interior floor and exterior ground surfaces will be covered to prevent contamination. All debris

generated during operations including but not limited to visible caulking, dust and debris shall be HEPA vacuumed continuously throughout the work shift and at the end of the work shift to avoid accumulation. Any tears or rips that occur in polyethylene barriers shall be repaired or removed and replaced with new protections.

- All equipment utilized to perform cutting, or demolition of adjacent materials shall be equipped with appropriate dust collection systems. If ladders are utilized to remove the windows, those ladders will be properly decontaminated.
- All surfaces adjacent to materials removed shall be properly decontaminated upon completing the removal of PCB Bulk Product Waste and PCB Remediation Waste. The work to cut and remove PCB Remediation Waste will result in dust on surfaces to remain and this dust may contain PCBs. All visible dust shall be removed using HEPA vacuums and wet cleaning methods with solvent or other acceptable products.
- Appropriate PCB waste containers shall be placed adjacent to abatement zones. Containers shall be lined, covered and secured. The PCB waste containers shall be properly marked as described in 40 CFR Part 761.40 & 761.45 and stored in accordance with 40 CFR Part 761.65.

3.2 Removal Procedures

The following removal procedures shall be utilized to conduct PCB Bulk Product Waste and PCB Remediation Waste removal.

3.2.1 PCB Bulk Product Waste Materials

PCB Bulk Product Waste Materials including PCB interior and exterior caulk shall be handled and removed from specified locations for proper disposal. Materials shall be removed in a manner which does not breakdown the materials into fine dust or powder to the extent feasible. Tools to be utilized shall include hand tools such as sharp point scrapers to remove materials from adjacent substrates. Any mechanical removal equipment shall be appropriately fitted with dust collection systems. Any dry or brittle caulking materials or other PCB Bulk Product waste shall be removed with additional engineering controls such as use of a HEPA vacuum to remove accumulated dust or debris during removal. Once removed, materials shall be placed in lined containers or into appropriate temporary containers such as 6-mil polyethylene disposal bags for controlled transport to PCB waste containers at the end of each work shift. PCB Bulk Product Waste shall be stored for disposal in accordance with 40 CFR Part 761.65. All waste containers shall be appropriately marked in accordance with 40 CFR Part 761.40 & Part 761.45.

Sequence of removal shall follow these general requirements:

1. PCB caulking shall be removed from all interior and exterior windows and/or door frame caulk at the interface of the metal frame and cmu block/brick walls and shall be properly containerized for disposal as PCB Bulk Product Waste. Surfaces from which PCB caulking has been removed shall be cleaned with solvent based cleaner and wire brush to remove all visible caulking prior to proceeding with removal of PCB Remediation Waste. All metal window and door components in contact with the caulk will be removed and disposed of as PCB Bulk Product Waste without attempting to clean them.

2. Off-site disposal of caulking associated with the window frame will be at an EPA, TSCA-approved and permitted hazardous waste landfill.

3.2.2 PCB Remediation Waste Materials

PCB Bulk Remediation Waste Material includes exterior soffit caulk, porous interior cmu concrete blocks and exterior bricks. The primary waste resulting from removal of these materials will be PCB contaminated dust and debris from cutting and removal of blocks/bricks. Waste shall be immediately containerized in temporary 6-mil polyethylene disposal bags for disposal. These containers shall be sealed in abatement zone when full during collection and then placed in disposal containers/storage trailers. The containers shall not be emptied into other containers to avoid dispersal of dust or fugitive emissions. No dry sweeping, dusting or blowing shall be allowed.

The use of minimal quantities of water spray to moisten the generated dust prior to collection shall be utilized. Under no circumstances shall the PCB Remediation Waste show evidence of free liquid water or pooling within the waste stream. Any liquid used to wet the dust and debris to control fugitive emissions shall be collected and disposed of as PCB Liquid Waste in accordance with 40 CFR Part 761.61 (a)(5)(iv). All rags and other cleaning materials used to clean shall also be properly disposed of as PCB Remediation Waste. All PCB Remediation Waste shall be stored for disposal in accordance with 40 CFR Part 761.65. All waste containers shall be appropriately labeled in accordance with 40 CFR Part 761.40 & Part 761.45. Sequence of removal shall follow the following general requirements:

1. PCB caulking shall be removed from all exterior soffit caulk at the interface of the tectum soffit and brick wall and shall be properly containerized for disposal as PCB Bulk Remediation Waste. Surfaces from which PCB caulking has been removed shall be cleaned with solvent based cleaner and wire brush to remove all visible caulking from the substrate. The substrate (tectum panel and brick) do not need to be removed as PCB Bulk Remediation Waste as they did not detect any PCB.
2. Testing has confirmed PCB >1 PPM in the several courses of interior cmu blocks on either end of the rooms in the original 1963 wing where work is planned. However, samples of the "infill" cmu block between the windows did not detect any PCB. **The Owner has decided to remove all the interior cmu blocks due to PCB contamination of numerous layers and dispose them as PCB Remediation Waste.** This shall be performed using mechanical tools equipped with dust controls.
3. Testing has confirmed PCB >1 PPM in the first courses of exterior brick (at source) and concrete layer where work is planned in the original 1963 wing. **The Owner has decided to remove all the exterior bricks/concrete layers due to PCB contamination and dispose them as PCB Bulk Remediation Waste.** This shall be performed using mechanical tools equipped with dust controls.
4. All exterior brick, interior CMU block walls, soffit caulk, metal window casings and door casings within work areas will be removed in their entirety. The exterior brick and interior CMU walls will be removed and disposed of as PCB Remediation Waste. The caulk at the tectum soffit (identified to contain <50 ppm in another portion of building, see comment in 12 a) will be removed and disposed of as PCB Bulk Remediation Waste with exterior brick/concrete wall.

CMU blocks will be first placed in nylon mesh bags then polyethylene bags and closed leak tight with duct tape within containments to comply with requirement of Section 765.65. Sealed bags will be removed from containment to storage trailer/dumpster placed on site.

4. Off-site disposal of soffit caulking and interior cmu blocks and exterior bricks associated with the windows will be at a state-approved non-hazardous solid waste disposal facility.
5. Once materials have been removed and surfaces cleaned, Eagle Environmental, Inc. representative shall be notified. Post removal visual inspection shall be performed to verify removal and cleaning.

3.3 Air Monitoring During Remediation

Eagle Environmental will use a Real Time Area Aerosol Monitor (TSI DUSTTRAK Model 8530) to perform background air sampling outside the contained work area to ascertain concentration of airborne particulate matter during the removal. This machine is a direct continuous read instrument and the data can be downloaded to a computer. The machine will be programmed to collect readings every five minute and compute an overall daily average. We will first determine the existing concentration (background level) before the removal starts and then compare that result with the reading collected during the work. We will use twice the value of the background average or $150 \mu\text{g}/\text{m}^3$, whichever is less, as the target value that will not be exceeded. If a spike in reading is observed on a given day, we try to found out reasons behind such spike and provide explanations.

3.4 Post-Remediation Verification Sampling Plan

Following the completion of the removal of PCB Bulk Product Waste and PCB Remediation Waste, Eagle Environmental, Inc shall implement the following sampling verification plan in accordance with 40 CFR Part 761.61 (6) and to the extent applicable Sub-part O and P.

Upon completion of work in each area, a visual inspection of all remediated surfaces for visible evidence of dust and debris shall be performed. Surfaces shall also be inspected for visible PCB source materials that may not have been removed. The visual inspection shall provide in a preliminary way, verification that remediation work has been completed in accordance with this SIDP. Visual inspection shall ensure no visible dust or debris is present on adjacent surfaces where caulking and block walls were removed. In addition to the remediated surfaces, the surfaces of protective coverings and isolation barriers shall be inspected to ensure they are cleaned of dust and debris. No sampling shall be performed until the visual inspection is complete and the clearance criteria satisfied. Sampling shall also not occur until all designated work to remove PCBs is completed.

3.4.1 Interior Porous Concrete Blocks

Sampling of interior porous substrates identified PCB in concentration over 1 PPM up to the sixth course of cmu blocks. **The Owner has decided to remove all the interior cmu blocks by and dispose them as PCB Bulk Remediation Waste. We do not plan to collect verification wipe sampling due to complete removal.**

Clearance wipe samples will be collected from the interior floor surfaces at the rate of one (1) wipe sample per every twenty (20) linear feet interior length of CMU block wall that will be removed under this application following standard wipe test as specified in 40 CFR 761.123. The reporting limit of the analytical method shall be 1 µg/100cm². If any location exceeds this clearance objective, additional cleaning will be conducted.

3.4.2 Exterior Porous Brick/Concrete Walls

Sampling of exterior porous substrates identified PCB in concentration over 1 PPM only up to the first course of bricks/concrete. None of the samples of the second course of brick detected any PCB. **The Owner has decided to remove all the exterior brick/concrete walls and dispose them as PCB Bulk Remediation Waste. We do not plan to collect verification wipe sampling due to complete removal.**

Phoenix Environmental Laboratories, Inc. of Manchester, CT will analyze the samples. Phoenix Environmental Laboratory is an accredited laboratories for PCB analysis. The analysis method shall include extraction using EPA Method 3500B/3540C of SW-846 (Soxhlet Extraction) and analysis for PCBs using EPA Method 8082 of SW-846.

Upon completion of the removal, we will collect limited air samples from inside and outside the work area in accordance with EPA Method TO-4A or TO-10A. Air volume shall be sufficient to achieve a laboratory reporting limit of < 50 ng/m³. At a minimum, PCB analysis shall include PCB homologues and/or PCB congeners. Con-Test Analytical Laboratory, Inc. in East Longmeadow, MA will analyze the samples.


4.0 Schedule and Plan Certification

It is the intent of the Owner (Town of Bolton) to begin the removal of PCB Bulk Product Waste and PCB Bulk Remediation Waste Materials during on-going abatement work in accordance with this plan. It is anticipated that the work shall be performed as expeditiously as possible to meet the construction schedule. Upon completing the PCB Remediation and verification sampling confirming that the Project Objectives have been met, the renovation work shall commence.

The Owner hereby certifies that all the sampling plans, sample collection procedures, sample preparation procedures, extraction procedures and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are on file at the School and available for EPA inspection.


Owner's Representative
Joyce Stille
Administrative Officer

6/6/11
Date


Eagle Environmental, Inc. Representative
Ashis Roychowdhury
Executive Vice President

06-03-2011
Date

DIAGRAM 1-1
SITE LOCATION MAP

Google maps Address

To see all the details that are visible on the screen, use the "Print" link next to the map.

[Get Directions](#) [My Maps](#)

[Print](#) [Send](#) [Link](#)

Move the marker for 72 Brandy St, Bolton, CT 06043

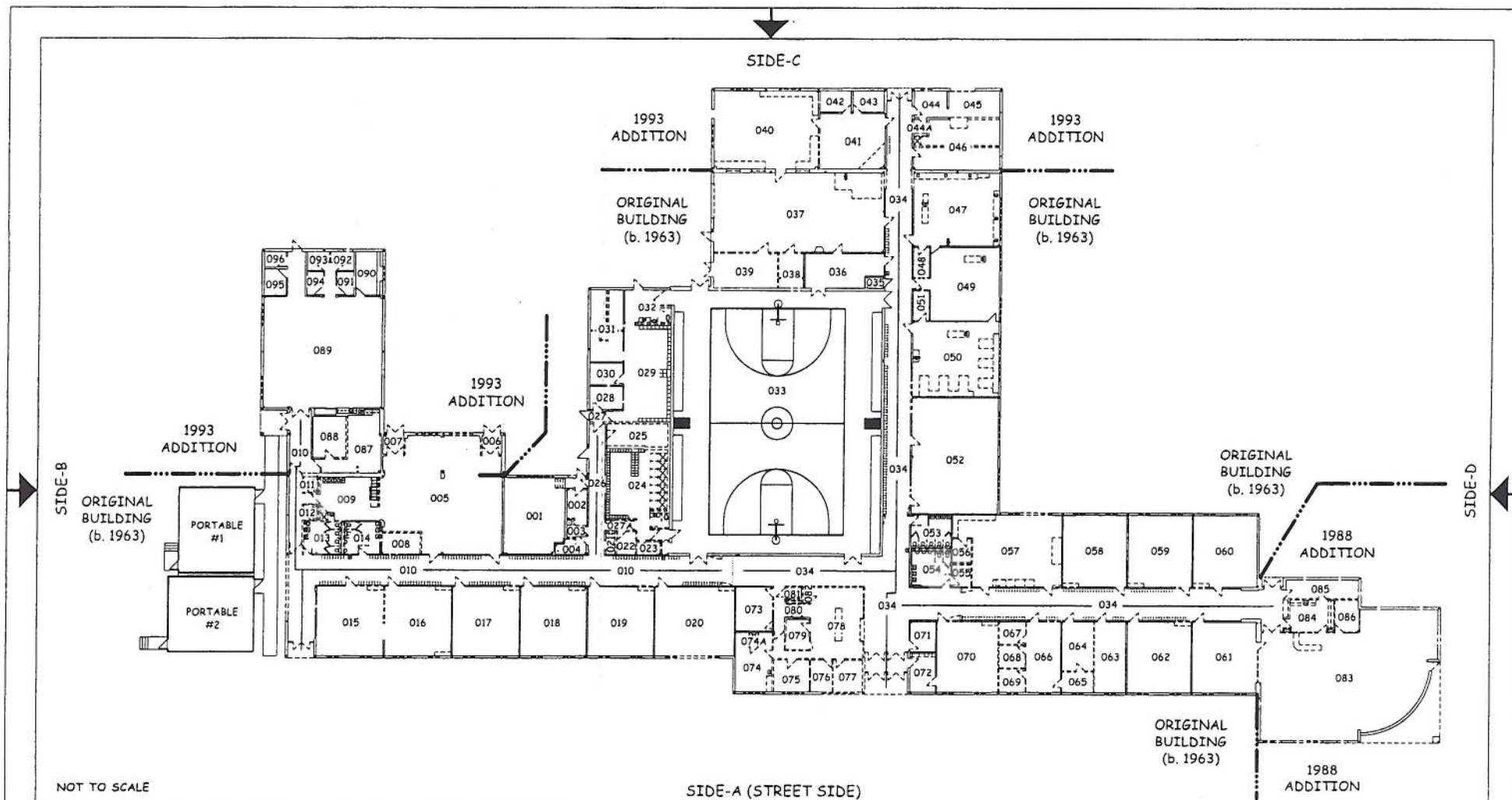
[Save](#)

[Cancel](#)



Bounty High School Video - www.youtube.com/BountyVideo - Bounty Takes Over High School Science Class Watch Fun!

DIAGRAM 2-1
BUILDING FLOOR PLAN (FP-1)



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BOLTON HIGH SCHOOL
72 BRANDY STREET
BOLTON, CONNECTICUT
FLOOR PLANS

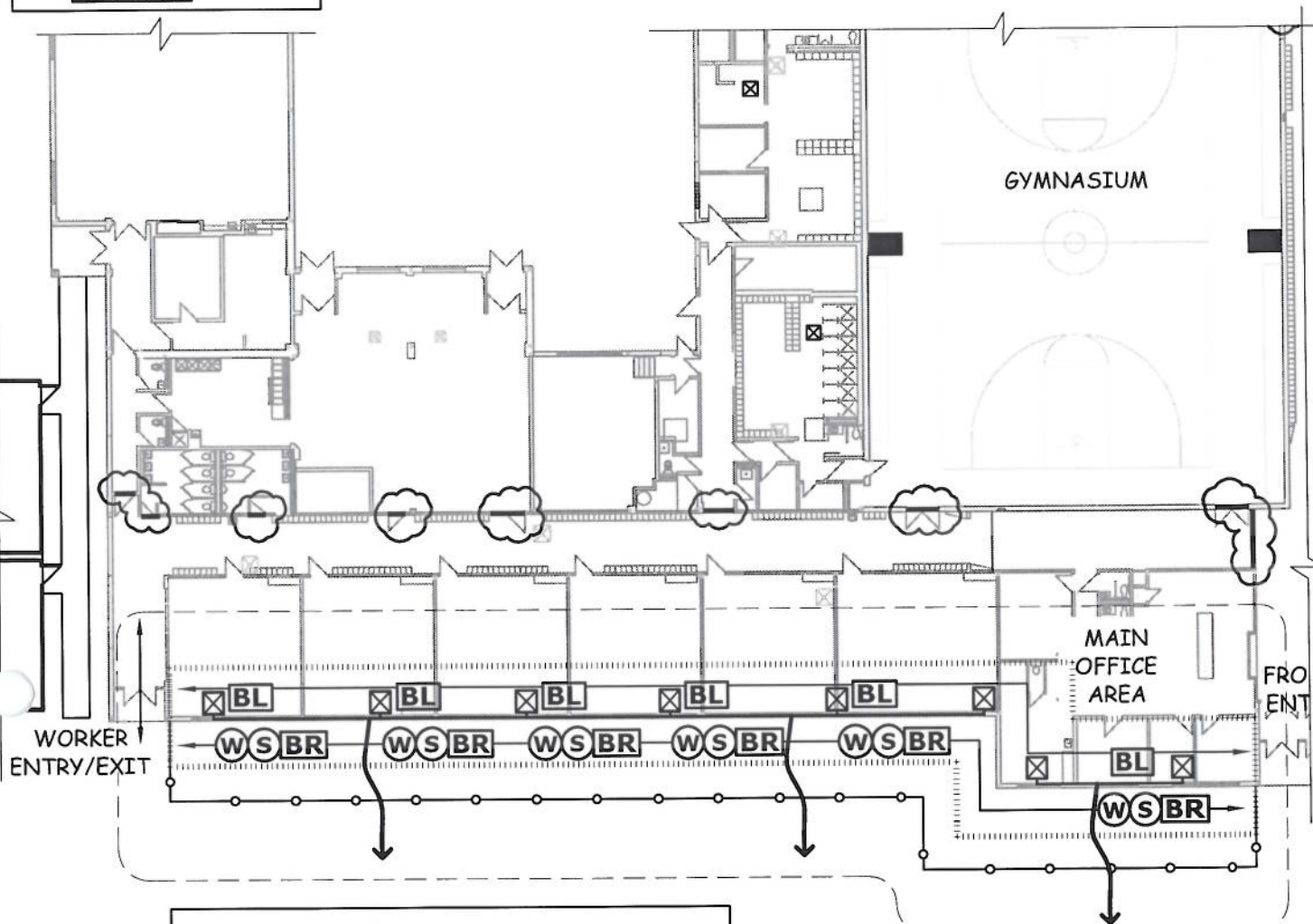
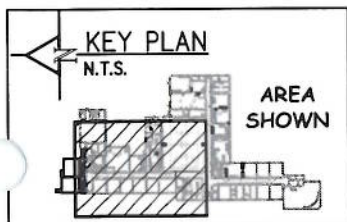
DATE: 2/23/11
PROJECT NO.: 10-073.10A
DRAWN BY: MR
REVIEWED BY: AR

SHEET NO.

FP-1

SHEET 1 OF 1

DIAGRAM 2-2
WORK AREA DIAGRAM



PCB REMEDIATION KEY:

(AC=ASBESTOS CONTAINING)
(PCB=POLY-CHLORINATED BIPHENOLS)

- (W)** REMOVE AND DISPOSE OF ALL AC/PCB CAULK LOCATED AT THE INTERIOR AND EXTERIOR OF WINDOW AND DOOR FRAME OPENING. REMOVE AND DISPOSE OF ENTIRE AC COMPOSITE SILL AND ALL ASSOCIATED ADHESIVE. ALL WORK TO BE PERFORMED FROM THE EXTERIOR OF THE STRUCTURE IN FULL CONTAINMENT.
- (S)** REMOVE AND DISPOSE OF ALL AC/PCB SOFFIT CAULK AT SOFFIT/WALL INTERFACE. ALL WORK TO BE PERFORMED IN FULL CONTAINMENT.
- (BR)** REMOVE STUCCO AND BRICK WALL TO ACCESS RESIDUAL AC/PCB CAULK ON BRICK SILL. REMOVE AND DISPOSE OF BRICK SILL AS PCB CONTAMINATED WASTE WHERE SILL IS TO BE REMOVED TO FACILITATE NEW CONSTRUCTION.
- (BL)** REMOVE BLOCK WALL TO ACCESS RESIDUAL AC/PCB CAULK. REMOVE AND DISPOSE OF BLOCK AS PCB CONTAMINATED WASTE.

SYMBOL KEY:

- LIMITS OF ABATEMENT AREA
- APPROXIMATE CHAIN-LINK FENCE LINE
- APPROXIMATE AREA OF CONTAINMENT
- ☁ LOCATION OF RIDGID BARRIER
- ☒ NEGATIVE AIR MACHINE WITH EXHAUST PATH

SCALE:
NOT TO SCALE

SHEET NO.

PCB-1

SHEET 1 OF 1



EAGLE ENVIRONMENTAL, INC.

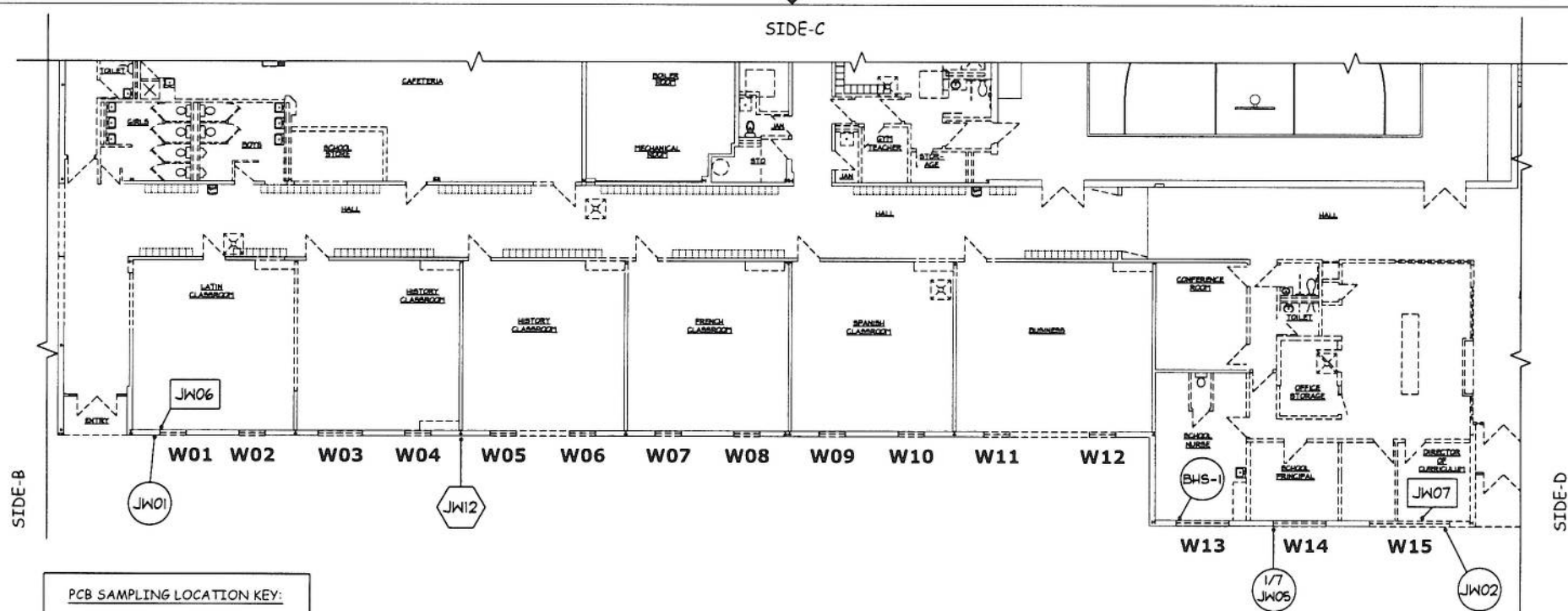
DATE: 6/3/11
PROJECT NO.: 10-037.11C
DRAWN BY: BLS
REVIEWED BY: AR

PCB REMEDIATION - WORK AREA DIAGRAM
BOLTON HIGH SCHOOL
72 BRANDY STREET
BOLTON, CONNECTICUT

531 NORTH MAIN STREET
BRISTOL, CONNECTICUT 06010
860-589-8257

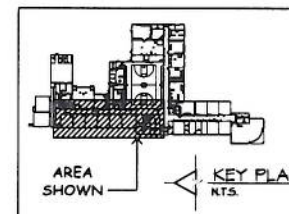
DIAGRAM 2-3
SAMPLE LOCATION DIAGRAMS – SOURCE MATERIALS (PCB-S-1 through PCB-S-4)

SIDE-C



PCB SAMPLING LOCATION KEY:

- W#** WINDOW NUMBER
- JW#** INTERIOR WINDOW FRAME CAULK
- JW#** EXTERIOR WINDOW AND DOOR FRAME CAULK
- JW#** CAULK AT TECTUM ROOF DECK



AREA SHOWN
KEY PLAN
N.T.S.

NOT TO SCALE

SIDE-A (STREET SIDE)



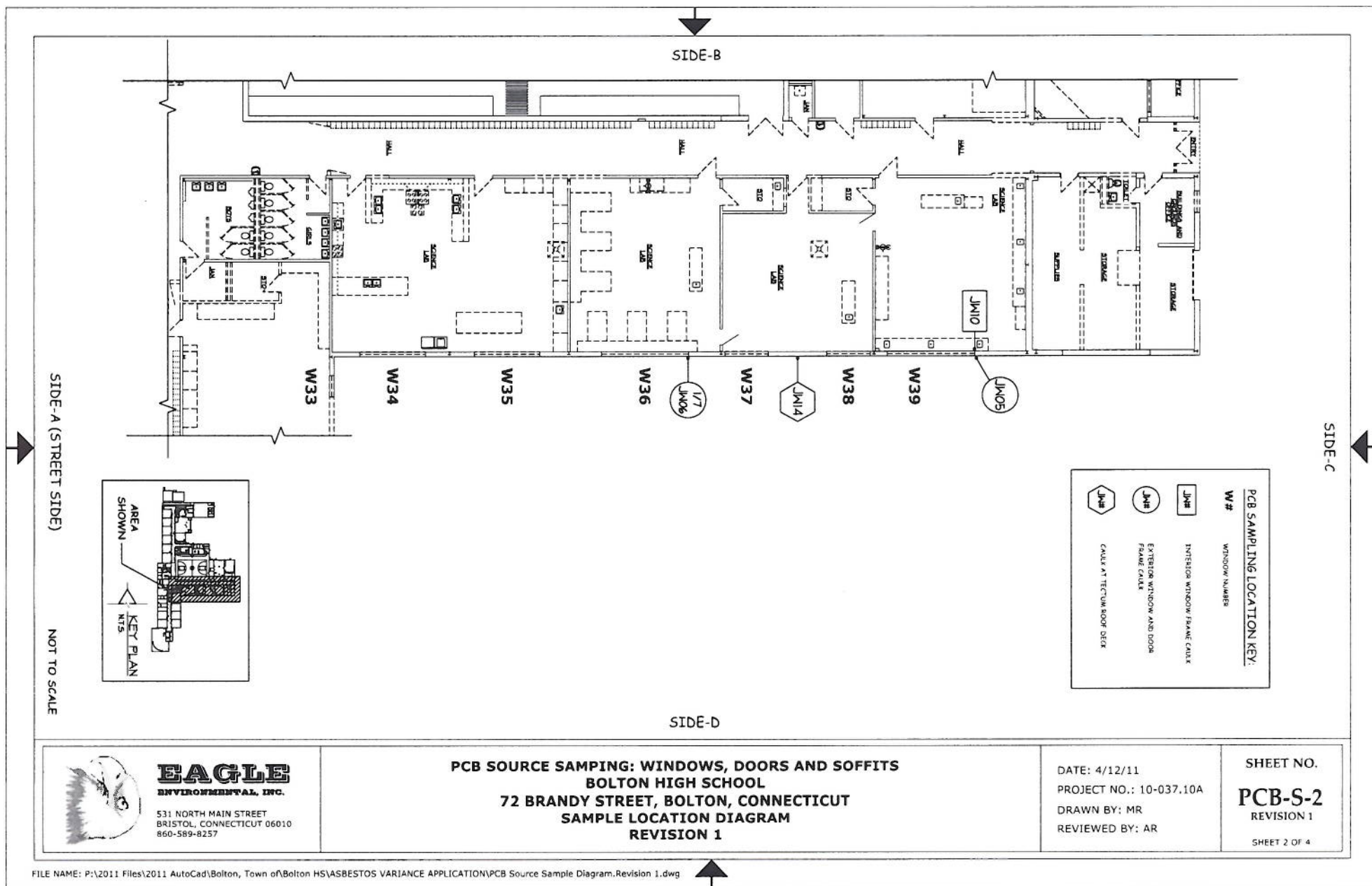
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ENVIRONMENTAL, INC.

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860-589-8257

**PCB SOURCE SAMPLING: WINDOWS, DOORS AND SOFFITS
BOLTON HIGH SCHOOL
72 BRANDY STREET, BOLTON, CONNECTICUT
SAMPLE LOCATION DIAGRAM
REVISION 1**

DATE: 4/12/11
PROJECT NO.: 10-037.10A
DRAWN BY: MR
REVIEWED BY: AR

SHEET NO.
PCB-S-1
REVISION 1
SHEET 1 OF 4



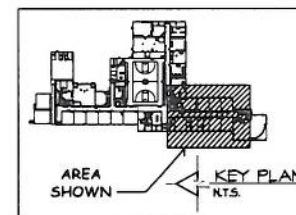
SIDE-C

PCB SAMPLING LOCATION KEY:

- W#** WINDOW NUMBER
- JW#** INTERIOR WINDOW FRAME CAULK
- JW#** EXTERIOR WINDOW AND DOOR FRAME CAULK
- JW#** CAULK AT TECTUM ROOF DECK

SIDE-D

SIDE-A (STREET SIDE)



NOT TO SCALE



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**PCB SOURCE SAMPLING: WINDOWS, DOORS AND SOFFITS
BOLTON HIGH SCHOOL
72 BRANDY STREET, BOLTON, CONNECTICUT
SAMPLE LOCATION DIAGRAM
REVISION 1**

DATE: 4/12/11
PROJECT NO.: 10-037.10A
DRAWN BY: MR
REVIEWED BY: AR

SHEET NO.
PCB-S-3
REVISION 1
SHEET 3 OF 4

SIDE-C

SIDE-B

SIDE-D

SIDE-A (STREET SIDE)

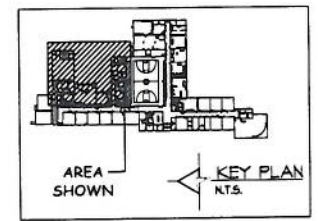
PCB SAMPLING LOCATION KEY:

W# WINDOW NUMBER

JW# INTERIOR WINDOW FRAME CAULK

JWR EXTERIOR WINDOW AND DOOR FRAME CAULK

JWR CAULK AT TECTUM ROOF DECK



NOT TO SCALE



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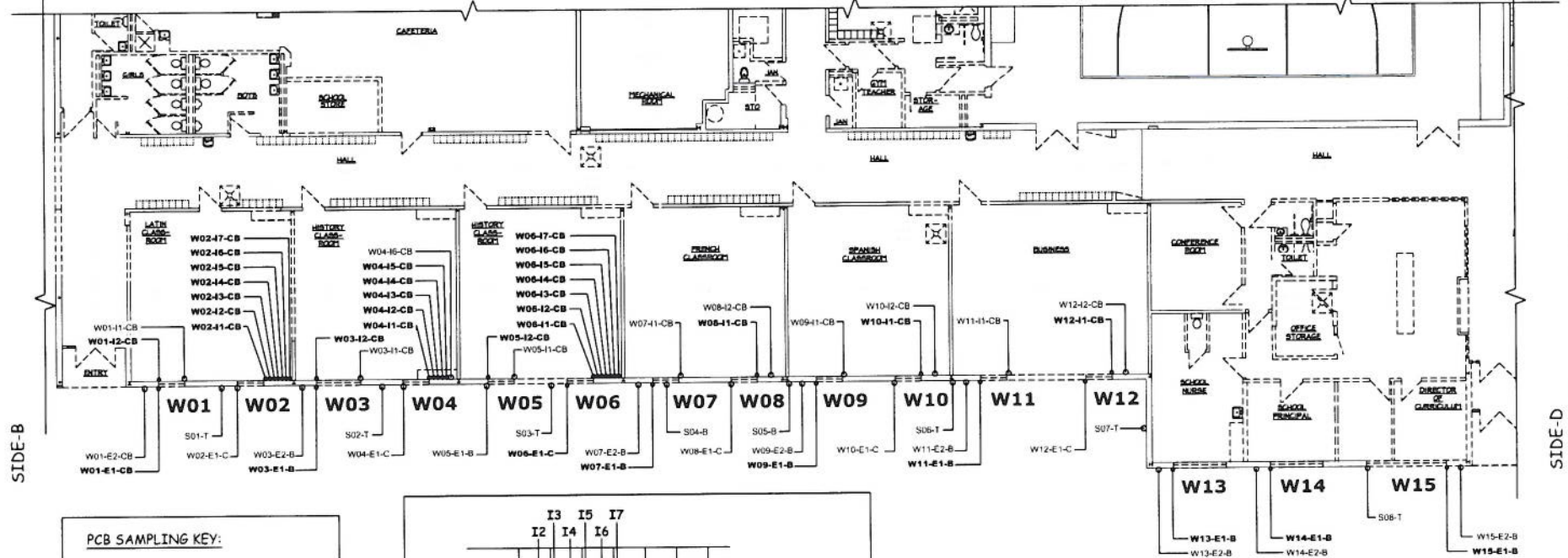
**PCB SOURCE SAMPLING: WINDOWS, DOORS AND SOFFITS
BOLTON HIGH SCHOOL
72 BRANDY STREET, BOLTON, CONNECTICUT
SAMPLE LOCATION DIAGRAM**

DATE: 4/12/11
PROJECT NO.: 10-037.10A
DRAWN BY: MR
REVIEWED BY: AR

SHEET NO.
PCB-S-4
SHEET 4 OF 4

DIAGRAM 2-4
SAMPLE LOCATION DIAGRAMS – ADJACENT POROUS SURFACES
(PCB-C-1 through PCB-C-3)

SIDE-C



PCB SAMPLING KEY:

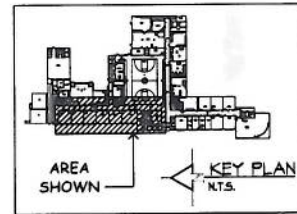
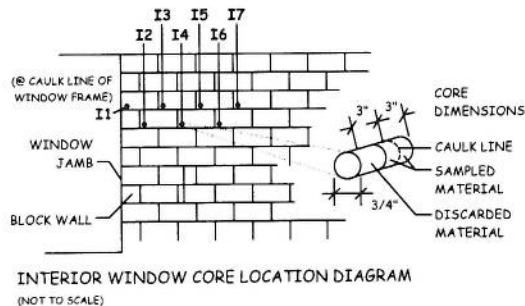
W# WINDOW NUMBER

W03-E1-B SAMPLE TESTING POSITIVE FOR PCBs

W03-E2-B SAMPLE TESTING NEGATIVE FOR PCBs

W : WINDOW
S : SOFFIT
I : INTERIOR
E : EXTERIOR

B : BRICK
C : CONCRETE
CB : CINDER BLOCK
T : TECTUM



SIDE-A (STREET SIDE)

NOT TO SCALE



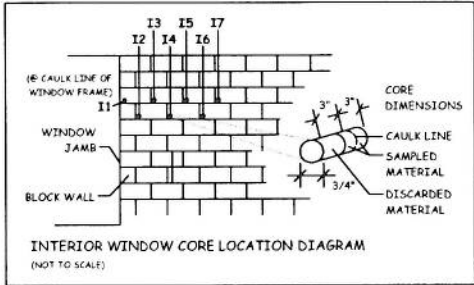
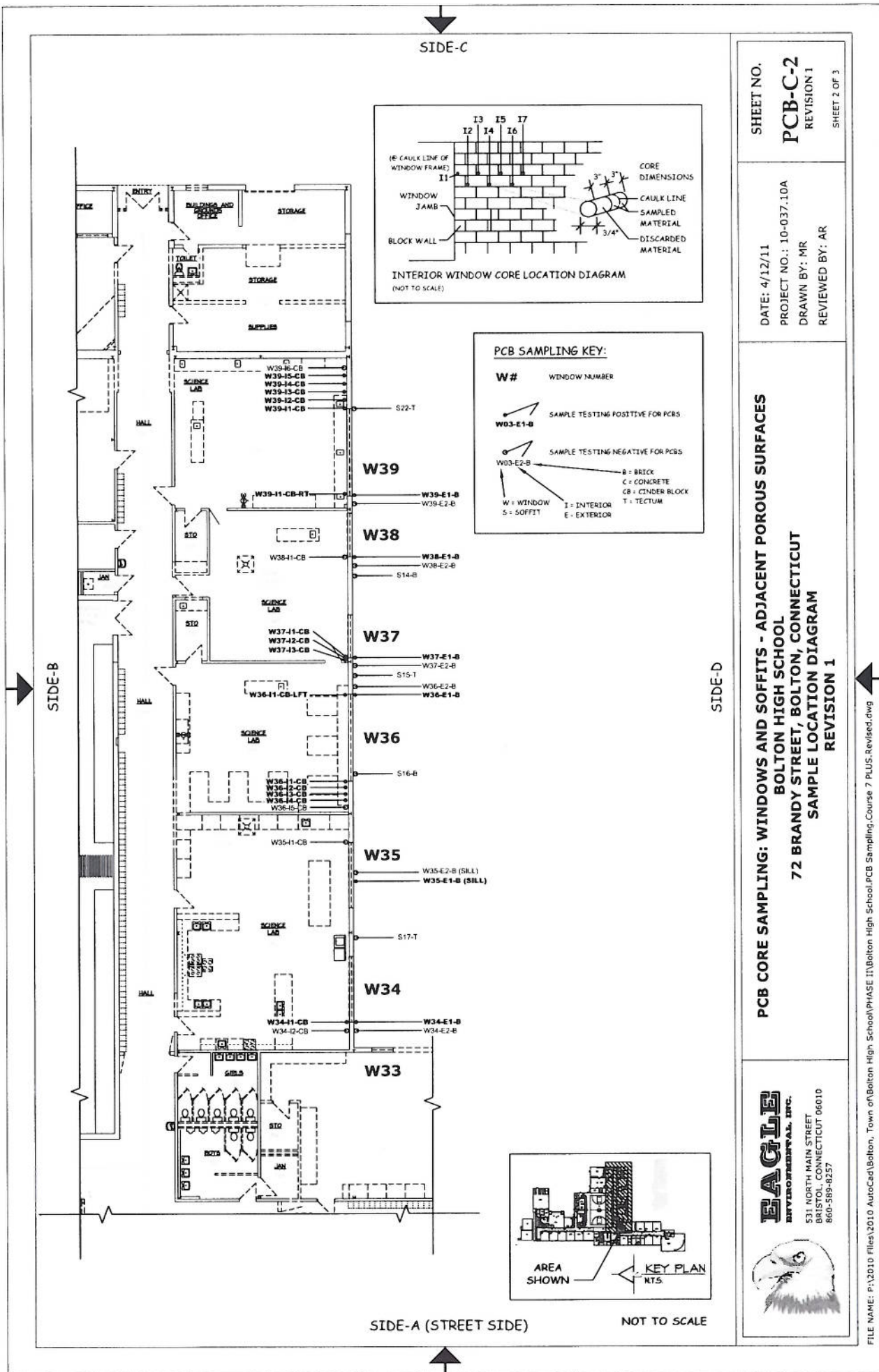
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PCB CORE SAMPLING: WINDOWS AND SOFFITS - ADJACENT POROUS SURFACES
BOLTON HIGH SCHOOL
72 BRANDY STREET, BOLTON, CONNECTICUT
SAMPLE LOCATION DIAGRAM
REVISION 1

DATE: 4/12/11
PROJECT NO.: 10-037.10A
DRAWN BY: MR
REVIEWED BY: AR

SHEET NO.
PCB-C-1
REVISION 1
SHEET 1 OF 3



PCB SAMPLING KEY:

W# WINDOW NUMBER

W03-E1-B SAMPLE TESTING POSITIVE FOR PCBs

W03-E2-B SAMPLE TESTING NEGATIVE FOR PCBs

W = WINDOW
S = SOFFIT
I = INTERIOR
E = EXTERIOR

B = BRICK
C = CONCRETE
CB = CINDER BLOCK
T = TECTUM

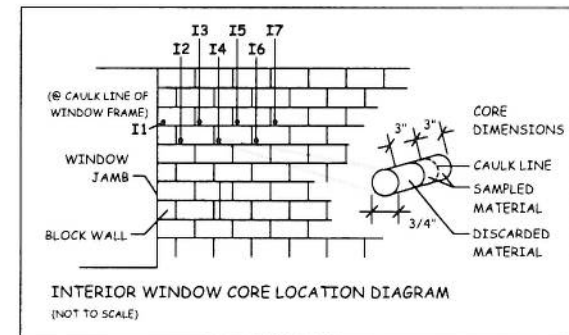
SHEET NO.
PCB-C-2
REVISION 1
SHEET 2 OF 3

DATE: 4/12/11
PROJECT NO.: 10-037.10A
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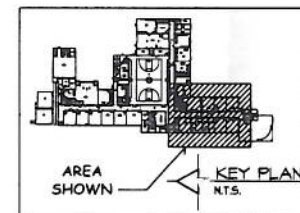
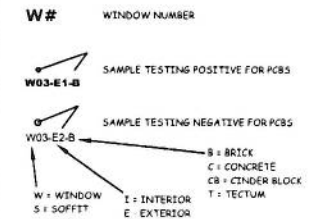
PCB CORE SAMPLING: WINDOWS AND SOFFITS - ADJACENT POROUS SURFACES
BOLTON HIGH SCHOOL
72 BRANDY STREET, BOLTON, CONNECTICUT
SAMPLE LOCATION DIAGRAM
REVISION 1

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SIDE-C



PCB SAMPLING KEY:



SIDE-B

NOT TO SCALE

SIDE-A (STREET SIDE)

NOT TO SCALE



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PCB CORE SAMPLING: WINDOWS AND SOFFITS - ADJACENT POROUS SURFACES
BOLTON HIGH SCHOOL
72 BRANDY STREET, BOLTON, CONNECTICUT
SAMPLE LOCATION DIAGRAM
REVISION 1

DATE: 4/12/11
PROJECT NO.: 10-037.10A
DRAWN BY: MR
REVIEWED BY: AR

SHEET NO.
PCB-C-3
REVISION 1
SHEET 3 OF 3

APPENDIX A

TABLE 2.1.1: SAMPLING OF SOURCE MATERIALS: RESULT SUMMARY,
LABORATORY RESULTS AND CHAIN OF CUSTODY FORMS

(RESULTS ENCLOSED IN ATTACHED CD)

APPENDIX B

TABLE 2.1.2: CORE SAMPLING OF INTERIOR SUBSTRATES FOR WINDOWS (CMU BLOCKS): RESULT SUMMARY, LABORATORY RESULTS AND CHAIN OF CUSTODY

(RESULTS ENCLOSED IN ATTACHED CD)

APPENDIX C

TABLE 2.1.3: CORE SAMPLING OF EXTERIOR SUBSTRATES FOR WINDOWS
(BRICKS): RESULT SUMMARY, LABORATORY RESULTS AND CHAIN OF CUSTODY

(RESULTS ENCLOSED IN ATTACHED CD)

APPENDIX D

TABLE 2.1.4: CORE SAMPLING OF EXTERIOR SUBSTRATES FOR SOFFIT (TECTUM & BRICKS): RESULT SUMMARY, LABORATORY RESULTS AND CHAIN OF CUSTODY

(RESULTS ENCLOSED IN ATTACHED CD)

APPENDIX E
TECHNICAL SPECIFICATION SECTION

SECTION 02110: ABATEMENT OF PCB-CONTAINING INTERIOR/EXTERIOR WINDOW CAULK & SOFFIT CAULK

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. PCB-containing caulk containing greater than 50 PPM of PCB has been identified on the interior and exterior window/door frames in the 1963 original structure of the school. PCB-containing caulk containing less than 50 PPM but more than 1 PPM of PCB has been identified on the exterior soffit. The removal of these caulks and remediation of adjacent porous surfaces and decontamination shall be performed in accordance with this section.

1.2 GENERAL REQUIREMENTS

- A. The Contractor shall furnish all labor, materials, facilities, equipment, installation services, employee training, notifications, permits, licenses, certifications, agreements and incidentals necessary to perform the specified work. Work shall be performed in accordance with the contract documents, the latest regulations from the Occupational Safety and Health Administration (OSHA), the United States Environmental Protection Agency (USEPA), the State of Connecticut and all other applicable federal, state and local agencies. Whenever the requirements of the above references conflict or overlap, the more stringent provision shall apply.
- B. All project personnel engaged in the work covered under this section shall be trained with OSHA 40-Hour HAZWOPER training in accordance with OSHA Regulations 29 CFR 1910 and 1926.
- C. The Contractor shall provide a Project Health and Safety Officer having a minimum of eight (8) hours of supervisor training in hazardous waste site operations in accordance with the requirements of 29 CFR 1910. The supervisor must be on site at all times during abatement work.
- D. The caulks have also been confirmed to be asbestos containing.
- E. The Contractor shall be responsible for removing all interior cmu block walls and exterior brick/concrete walls and dispose these as PCB Bulk Remediation Waste. This will include complete removal of interior cmu blocks and exterior bricks/concrete walls from the 1963 original structure of the school as indicated in Section 1 and Diagram 2-2 of this Self Implementing On-Site Cleanup and Disposal Plan (SIDP).

1.3 SUBMITTALS

- A. The following documents shall be submitted to the Owner's Consultant:
 - 1. Work Plan: A written work plan that describes the methods to be used for the removal and containment of caulk and associated debris, and the contractor's plan to protect workers and to prevent PCB contamination migrating from the work areas. The work plan shall include floor plans and/or site plans indicating the proposed work areas for all PCB removal work as outlined in this Specification.

2. Training Documentation: Documentation of OSHA 40-Hour HAZWOPER Training for all employees and subcontractors to be used for the abatement work and 8-Hour HAZWOPER Supervisor Training for the designated on-site Health and Safety Officer for the abatement work.
 3. PCB Disposal Plan: A written plan that details the Contractor's plan for transportation and disposal of PCB-containing wastes generated during the project. The Disposal Plan shall identify:
 - a. Waste packaging, labeling, placarding and manifesting procedures,
 - b. The name, address and 24-hour contact number for the proposed treatment or disposal facility or facilities to which waste generated during the project will be transported.
 - c. The name, address, contact person(s) and state-specific permit numbers for proposed waste transporters, and EPA identification number for firms that will transport hazardous waste.
 - d. The license plate numbers of vehicles to be used in transporting of the waste from the site to the disposal facility.
 - e. The route(s) by which the waste will be transported to the designated disposal facility, and states or territories through which the waste will pass if the waste is to be disposed of outside of the State of Connecticut.
 4. Material Safety Data Sheets: Material Safety Data Sheets (OSHA Form 174 or equivalent) and manufacturer's information shall be provided for all chemicals and materials to be used during the project.
- B. The following documents shall be submitted to the Owner's Consultant within twenty one (21) calendar days following removal of waste from the site:
1. Waste Profile Sheets
 2. Pre-Disposal Analysis Test Results (If required by disposal facility)
 3. Manifests signed by the disposal facility
 4. Tipping Receipts provided by the disposal facility
 5. Certification of Final Treatment Disposal signed by the responsible disposal facility official.

1.4 APPLICABLE STANDARDS AND REGULATIONS

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only. Where a conflict or overlap among regulations and/or these specifications exist, the most stringent requirements shall apply. The Owner's Consultant will determine which requirements are most stringent.
1. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
 - a. ANSI, Z89.1 Personnel Protective Equipment-Protective Headwear for Industrial Workers-Requirements (Latest Revision) ANSI. Z87

2. CODE OF FEDERAL REGULATIONS (CFR)

- a. 29 CFR Subpart D Walking-Working Surface
- b. 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response
- c. 29 CFR 1910.134 Respiratory Protection Standard
- d. 29 CFR 1910.1200 Hazard Communication
- e. 29 CFR 1926.20 General Health and Safety Provisions
- f. 29 CFR 1926.57 Ventilation
- g. 29 CFR 1926.59 Hazard Communication Program
- h. 29 CFR 1926.62 Lead Exposure in Construction
- i. 29 CFR 1926.65 Hazardous Waste Operations and Emergency Response
- j. 29 CFR 1926.95 Criteria for Personal Protective Equipment
- k. 29 CFR 1926, Subpart H Materials Handling, Storage, Use and Disposal
- l. 29 CFR 1926, Subpart L Scaffolding
- m. 29 CFR 1926, Subpart M Fall Protection
- n. 29 CFR 1926, Subpart X Ladders
- o. 29 CFR 1926, Subpart Z Toxic and Hazardous Substances
- p. 40 CFR 50.6 National Primary and Secondary Ambient Air Quality Standards for Particulate Matter
- q. 40 CFR 260 Hazardous Waste Management System: General
- r. 40 CFR 261 Identification and Listing of Hazardous Waste
- s. 40 CFR 262 Standards Applicable to Generators of Hazardous Waste
- t. 40 CFR 263 Standards Applicable to Transporters of Hazardous Waste
- u. 40 CFR 264 Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- v. 40 CFR 265 Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
- w. 40 CFR 268 Land Disposal Restrictions
- x. 40 CFR 700 Toxic Substances Control Act (TSCA)
- y. 40 CFR 761 PCBs Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions
- z. 49 CFR 105 Hazardous Materials Program. Definitions and General Procedures
- aa. 49 CFR 171 General Information, Regulations and Definitions
- bb. 49 CFR 172 Hazardous Material Tables. Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements
- cc. 49 CFR 173 Shippers-General Requirements for Shipments and Packaging's
- dd. 49 CFR 177 Carriage by Public Highway
- ee. 49 CFR 178 Specifications for Packaging's

3. NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH (NIOSH) Publication Number 87-10B Respiratory Decision Logic

- a. NIOSH/OSHA Booklet 3142 Lead in Construction
- b. Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (NIOSH Publication 85-115)

4. U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)
 - a. PUB 3126 Working with Lead in the Construction Industry
 - b. 29 CFR 1910, Subpart I, Appendix B-Non-Mandatory Compliance Guidelines for Hazard Assessment and Personal Protective Equipment Selection
5. REGULATIONS OF CONNECTICUT STATE AGENCIES (RCSA)
 - a. Hazardous Waste 22a-449(c)-100 through 119
 - b. Hazardous Waste Transporter Permits 22a-449(c)-11
 - c. Permit Fees for Hazardous Waste Materials Management 22a-454-1
6. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY GUIDANCE
 - a. Polychlorinated Biphenyl (PCB) Site Revitalization Guidance Under the Toxic Substances Control Act

1.5 POSTING AND RECORD MAINTENANCE REQUIREMENTS

- A. The following items shall be conspicuously displayed proximate to but outside of abatement work areas. The contractor shall assure that the posted regulations are not altered, defaced or covered by other materials.
- B. Exit Routes
 1. Emergency exit procedures and routes
- C. Emergency Phone Numbers
 1. A list Indicating the telephone numbers and locations of the local hospital(s); the local emergency squad; the local fire department; the local police department; the Poison Control Center; Chemical Transportation Emergency Center (CHEMTREC); the Connecticut State Department of Public Health's office; the contractor (on-site and after hours numbers); and the environmental consultant (on-site and after hours numbers).
- D. Warning Signs
 1. Warning signs shall be In English and the language of any workers on-site who do not speak English, and be of sufficient size to be clearly legible and display the following:

WARNING:
HAZARDOUS WASTE WORK AREA
PCBs-POISON
NO SMOKING, EATING OR DRINKING
AUTHORIZED PERSONNEL ONLY
PROTECTIVE CLOTHING IS REQUIRED IN THIS AREA

E. Items Available On-Site

1. The contractor shall maintain the following items on-site and available for review by all employees and authorized visitors:
 - a. Project Health and Safety Plan (HASP)
 - b. Certificates of Training for all workers and the project Supervisor
 - c. Codes, Standards and Publications
 - 1) Copies of applicable codes, standards, and publications
 - d. MSDS
 - 1) Material Safety Data Sheets (MSDS) for all chemicals used during the project.
 - e. Compliance Programs
 - 1) Copies of the contractor's written hazard communication, respiratory protection, and confined space entry programs.

1.6 MINIMUM REQUIREMENTS FOR WORKER HEALTH AND SAFETY

A. GENERAL

1. The contractor is responsible and liable for the health and safety of all on-site personnel and the off-site community affected by the project. All on-site workers or other persons entering the abatement work areas, decontamination areas or waste handling and staging areas shall be knowledgeable of and comply with the requirements of the site-specific Health and Safety Plan (HASP) at all times. The contractor's HASP shall comply with all applicable federal, state and local regulations protecting human health and the environment from the hazards posed by the work to be performed under this project.
2. The contractor shall not initiate on-site work in the contaminated areas until the HASP has been finalized, and approved by the Owner's Consultant.
3. Consistent disregard for the provisions of the HASP shall be deemed as sufficient cause for immediate stoppage of work and termination of the Contract or any Subcontracts without compromise or prejudice to the rights of the Owner or the Architect.
4. Any discrepancies between the contractor's HASP and these specifications or federal and state regulations shall be resolved in favor of the more stringent requirements that provide the highest degree of protection to the project personnel and the surrounding community and environment, as determined by the Owner's Consultant.
5. In addition to exposure concerns relating to the presence of PCBs, other health and safety considerations will apply to the work. The contractor shall be responsible for recognizing such hazards and shall be responsible for the health and safety of contractor employees at all times. It is the contractor's responsibility to comply with all applicable health and safety regulations.

B. HEALTH AND SAFETY PLAN

1. The contractor shall prepare and submit a site-specific Health and Safety Plan (HASP) to the Owner's Consultant a minimum of twenty one (21) business days prior to commencement of abatement work. The HASP shall govern all work conducted at the site during the abatement of caulk and related debris: waste handling, sampling, and management; and waste transportation.
2. At a minimum, the HASP shall address the requirements set forth in 29 CFR 1910.120, as further outlined below:
 - a. Health and Safety Organization
 - b. Site Description and Hazard Assessment
 - c. Training (asbestos abatement and HAZWOPPER)
 - d. Medical Surveillance
 - e. Work Areas
 - f. Personal Protective Equipment
 - g. Personal Hygiene and Decontamination
 - h. Standard Operating Procedures and Engineering Controls
 - i. Emergency Equipment and First Aid Provisions
 - j. Equipment Decontamination
 - k. Air Monitoring
 - l. Telephone List
 - m. Emergency Response and Evacuation Procedures and Routes
 - n. Site Control
 - o. Permit-Required Confined Space Procedures(If Applicable)
 - p. Spill Containment Plan
 - q. Heat and Cold Stress
 - r. Record Keeping
 - s. Community Protection Plan
3. The HASP shall be reviewed by all persons prior to entry into the abatement, decontamination, or waste staging areas, whether a representative of the contractor, owner, architect/engineer, environmental consultant, subcontractors), waste transporter or federal, state or local regulatory agency. Such review shall be acknowledged and documented by the contractor's Health and Safety Officer by obtaining the name, signature and affiliation of all persons reviewing the HASP.
4. The HASP shall be maintained so as to be readily accessible and reviewable by all site personnel throughout the duration of the-abatement project and until all waste materials are removed from the site and disposed of at the appropriate disposal facility.
5. The Contractor's on-site Health and Safety Officer shall be responsible for ensuring that project personnel and site visitors are informed of and comply with the provisions of the HASP at all times during the project.

C. WORK AREAS

1. The contractor shall establish and clearly identify work areas in the field. Access by equipment, site personnel, and the public to the work areas shall be limited as follows:

- a. Abatement Zone-The Abatement Zone(s) shall consist of all areas where abatement, waste handling and staging activities are ongoing and the immediately surrounding locale or other areas where contamination could occur. Each Abatement Zone shall be visibly delineated with orange construction fencing at a minimum, and restricted from access by all persons except those directly necessary to the completion of the respective abatement tasks. The Abatement Zones shall be relocated and delineated as necessary as work progresses from one portion of the project site to another, to limit access to each abatement area and to minimize risk of exposure to site workers and the general public. Access shall be controlled at the periphery of the Abatement Zones to regulate the flow of personnel and equipment into and out of each zone and to help verify that proper procedures for entering and exiting are followed. All persons within the Abatement Zones shall wear the appropriate level of protection established in the HASP.
- b. Decontamination Zone-The Decontamination Zone is the transition zone between the abatement area and the clean support zone of the project site, and is intended to reduce the potential for contaminants from being dispersed from the Abatement Zone to clean areas of the site. The Decontamination Zone shall consist of a buffer area surrounding each Abatement Zone through which the transfer of equipment, materials, personnel and containerized waste products will occur and in which decontamination of equipment, personnel, and clothing will occur. The Decontamination Zones shall be clearly delineated with orange construction fencing at a minimum and labeled with signage as provided in Part 1.6 of this Section. All emergency response and first aid equipment shall be readily maintained in these Zones. All protective equipment and clothing shall be removed or decontaminated in the Decontamination Zone prior to exiting to the Support Zone.
- c. Support Zone-The Support Zone will consist of the area outside the Decontamination Zones and the remainder of the project site. Administrative and other support functions and any activities that by nature need not be conducted in the Abatement or Decontamination Zone related to the project shall occur in the Support Zone. Access to the Abatement and Decontamination Zones shall be controlled by the Health and Safety Officer and limited to those persons necessary to complete the abatement work and who have reviewed and signed the HASP.

D. PERSONNEL PROTECTIVE EQUIPMENT

- 1. The contractor shall be responsible to determine and provide the appropriate level of personal protective equipment in accordance with applicable regulations and standards necessary to protect the contractor's employees and the general public from all hazards present.
- 2. The contractor shall provide all employees with the appropriate safety equipment and protective clothing to ensure an appropriate level of protection for each task, taking into consideration the chemical, physical, ergonomic and biological hazards posed by the site and work activities.
- 3. The contractor shall establish in the HASP criteria for the selection and use of personal protective equipment (PPE).

4. The PPE to be utilized for the project shall be selected based upon the potential hazards associated with the project site and the work to be performed. Appropriate protective clothing shall be worn at all times within the Abatement Zone.
5. The contractor shall provide the appropriate level of respiratory protection to all field personnel engaged in activities where respiratory hazards exist or there is a potential for such hazard to exit.
6. The contractor shall provide, as necessary, protective coveralls, disposable gloves and other protective clothing for all personnel that will be actively involved in abatement activities or waste handling activities or otherwise present in the Abatement Zones. Coveralls shall be of Tyvec or equivalent material, Should the potential for exposure to liquids exist, splash-resistant disposable suits shall be provided and utilized.
7. Protective coveralls, and other protective clothing shall be donned and removed within the Decontamination Zone and shall be disposed of at the end of each day. Ripped coveralls shall be immediately replaced after appropriate decontamination has been completed to the satisfaction of the Health and Safety Officer. Protective clothing shall not be worn outside of the Decontamination Zone.
8. Hard Hats, protective eyewear, rubber boots and/or other non-skid footwear shall be provided by the contractor as required for workers and authorized visitors, Safety shoes and hard hats shall be in conformance with ANSI Z89.1 (1969) and ANSI 241.1 (1967), respectively.
9. All contaminated protective clothing, respirator cartridges and disposable protective items shall be placed into proper containers to be provided by the contractor for transport and proper disposal in accordance with 40 CFR 262.

E. EMERGENCY EQUIPMENT AND FIRST AID REQUIREMENTS

1. The contractor shall provide and maintain at the site, at a minimum, the following Emergency and First Aid Equipment:
 - a. Fire Extinguishers.-a minimum of one (1) fire extinguisher shall be supplied and maintained at the site by the contractor throughout the duration of the project. Each extinguisher shall be a minimum of a 20-pound Class ABC dry fire extinguisher with Underwriters Laboratory approval per 29 CFR 1910.157.
 - b. First Aid Kit-a minimum of one (1) first aid kit meeting the requirements of 29 CFR 1910.151 shall be supplied and maintained at the site by the contractor throughout the duration of the project.
 - c. Communications-telephone communications (either cellular or land line) shall be provided by the contractor for use by site personnel at all times during the project.
2. The Health and Safety Officer shall be notified immediately in the event of personal injury, potential exposure to contaminants, or other emergency. The Health and Safety Officer shall then immediately notify the Owner's Consultant of same.
3. If a member of the work crew demonstrates symptoms of heat or cold stress, injury, chemical exposure or other similar issue, another team member present within the delineated abatement zone (i.e., suitably equipped with appropriate PPE provisions) should remove the affected person from the delineated work site and signal/communicate to the Health and Safety Officer of the incident. Precautions should be taken to avoid exposure of other individuals to contaminated media.

4. An evaluation of the person's condition shall be made by the Health and Safety Officer, to determine the appropriate course of action to administer first aid or other emergency response provision. The Health and Safety Officer shall assess the seriousness of the injury, give first aid treatment if appropriate, and arrange for appropriate emergency response from outside emergency services, if warranted.
5. If soiled clothing cannot be removed, the injured person will be wrapped in a blanket while transported from the site.
6. The Health and Safety Officer shall monitor the affected person to determine whether there are symptoms resulting from the exposure or injury. If there is a visible manifestation of exposure such as skin irritation, the affected party shall be referred to a medical facility for treatment and evaluation as to whether the manifestation may be indicative of a delayed or acute exposure, a secondary response to exposure such as skin infection or occupational dermatitis. All incidents of injuries and/or obvious chemical exposure shall be evaluated by the Health and Safety Officer and the Owner's Consultant to determine whether modifications to work practices and/or protective provisions are warranted.

F. STANDARD SAFETY AND HEALTH PROCEDURES AND ENGINEERING CONTROLS

1. The following provisions shall be employed to promote overall safety, personnel hygiene and personnel decontamination:
 - a. Each contractor or subcontractor shall ensure that all safety equipment and protective clothing to be utilized by its personnel is maintained in a clean and readily accessible manner at the site.
 - b. All prescription eyeglasses in use on this project shall be safety glasses conforming to ANSI Standard Z87.1. No contact lenses shall be allowed on the site.
 - c. Prior to exiting the delineated Decontamination Zone(s), all personnel shall remove protective clothing, and place disposable items in appropriate disposal containers to be dedicated to that purpose. Following removal of PPE, personnel shall thoroughly wash and rinse their face, hands, arms and other exposed areas with soap and tap water wash and subsequent tap water rinse. A fresh supply of tap water shall be provided at the site on each work day by the Contractor for this purpose.
 - d. All PPE used on site shall be decontaminated or disposed of at the end of each work day. Discarded PPE shall be placed in sealed CTDOT-approved 55-gallon barrels for off-site disposal.
 - e. Respirators, if necessary due to an upgrade to Level C PPE, shall be dedicated to each employee, and not interchanged between workers without cleaning and sanitizing.
 - f. Eating, drinking, chewing gum or tobacco, smoking, and any other practice that increases the likelihood of hand to mouth contact shall be prohibited within the delineated abatement and decontamination work zones. Prior to performing these activities, each employee shall thoroughly cleanse their face, hands, arms and other exposed areas,
 - g. All personnel shall thoroughly cleanse their face, hands, arms and other exposed areas prior to using toilet facilities.
 - h. No alcohol, tobacco, illicit drugs or firearms will be allowed on the site at any time.

- i. All personnel that are on non-prescription (i.e., over-the-counter) or prescription medication of any kind shall notify the Health and Safety Officer prior to conducting work at the site. The Health and Safety Officer will make a determination as to whether such individuals will be allowed to work on the site, and, if so, in what capacity. The Health and Safety Officer may require signed documentation from the Individual's personal physician stating what limitations may be posed by the medication or condition that may apply to that individual's work activities.
- j. Contact with potentially contaminated surfaces should be avoided, if possible. Field personnel should minimize walking through standing water/puddles, mud or other wet or discolored surfaces; kneeling on ground; and placing equipment, materials or food on ground or other potentially contaminated surface.
- k. The use of the "Buddy System" shall be employed at all times while conducting work at the site. Each employee shall frequently monitor other workers for signs of heat stress or chemical exposure or fatigue; periodically examine others PPE for signs of wear or damage; routinely communicate with others; and notify the Site Safety Officer in the case of an emergency.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

- A. All materials shall be delivered in the original packages, containers, or bundles bearing the name of the manufacturer and the brand name.
- B. Sealer shall be Siloxane WB Concentrate as manufactured by Prosoco, Inc. or approved equal
- C. House Keeping of Work Site
 - 1. The Contractor shall keep all surfaces as free as practical from accumulations of caulk, brick debris, mortar and other waste materials during the abatement work.
 - 2. All loose caulk, mortar and other debris shall be thoroughly collected and securely containerized in the final waste receptacles at the conclusion of each work day.
 - 3. All disposable personal protective equipment shall be placed in the designated waste receptacles at the conclusion of each work day or at any time that such items are removed or changed.
- D. Damaged or deteriorating materials shall not be used and shall be removed from the premises. Material that becomes contaminated with asbestos shall be decontaminated or disposed of as asbestos waste.
- E. Polyethylene sheet in a roll size to minimize the frequency of joints shall be delivered to job site with factory label indicating 4 or 6 mil.
- F. Tape or adhesive spray will be capable of sealing joints in adjacent polyethylene sheets and for attachment of polyethylene sheets to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.

2.2 TOOLS AND EQUIPMENT

- A. Provide suitable tools for PCB removal and encapsulation.
- B. The Contractor shall have air monitoring equipment of type and quantity to monitor operations and conduct personnel exposure surveillance per OSHA requirements.
- C. The Contractor shall have available sufficient inventory on site for materials necessary for the job including protective clothing, respirators, filter cartridges, polyethylene sheeting of proper size and thickness, tape, and air filters.
- D. The Contractor shall provide temporary electrical power sources such as generators (when required).
- E. Vacuum units, of suitable size and capacities for project, shall have HEPA filter(s) capable of trapping and retaining at least 99.97 percent of all monodispersed particles of 0.3 micrometers in diameter or larger.

PART 3 - EXECUTION

3.1 CAULK REMOVAL

- A. The section of the building under construction will be secured by a chain link fence that surrounds the various structures while they are under construction and is locked to prevent unauthorized access. The Contractor will set up hard physical barriers along with appropriate signage to separate occupied areas from construction areas within the building to prevent air exchange and unauthorized entry into the work areas.
- E. Shut down and/or isolate heating, cooling, and ventilation air systems or zones to prevent contamination and fiber dispersal to other areas of the structure. Lock and tag out circuits associated with heating and cooling units. During the work, vents within the work area shall be sealed with duct tape and polyethylene sheeting.
- B. Seal off all openings, including but not limited to corridors, doorways, skylights, ducts, grills, diffuser, and any other penetration of the work areas, with polyethylene sheeting minimum of six (6) mils thick sealed with duct tape. Doorways and corridors which will not be used for passage during the work shall be cordoned off with hard barriers to separate the work area from the occupied areas of the building. Install 5 micron water filtration socks in all floor drains prior to sealing.
- C. Prior to commencement of caulk abatement activities at each work area, a containment system shall be constructed by the contractor to capture and contain all materials removed during the abatement.
- D. The containment shall consist of two (2) layers of polyethylene sheeting having a minimum thickness of 6-mil on either side of the exterior wall from the ceiling to the floor. The floor surfaces shall also be covered with two (2) layers of 6-mil polyethylene sheeting. Extend the polyethylene flooring a minimum of twelve (12) inches up the walls. Ensure that the wall sheeting overlaps the floor sheeting from the top. The containment shall also constitute a ceiling constructed of two (2) layers of 6-mil polyethylene sheeting. The exterior part of the containment shall be sturdy enough to withstand inclement weather conditions.

- E. Create pressure differential between work areas and occupied areas by the use of acceptable negative air pressure equipment. The Remediation Contractor shall ensure required negative air pressure is obtained throughout the containment and the total volume of air within the work area is changed every fifteen (15) minutes.
- F. Post all approaches to each work area with PCB Warning signs. Warning signs shall be of size and type that are easily readable and are visible from all approaches to the work areas.

3.2 DECONTAMINATION ENCLOSURE SYSTEMS

- A. The Contractor shall establish a personnel and equipment decontamination system associated with each work area. Access between the contaminated and uncontaminated areas shall be through this decontamination enclosure only. The decontamination system shall be constructed of two layers of six-mil polyethylene sheeting. Pre-fabricated "pop-up" decontamination chambers will not be permitted on this project.
- B. Equipment to be utilized in connection with the caulk abatement, waste collection or that will or may come in direct contact with the site contaminants shall be decontaminated prior to leaving the site to prevent migration of the contaminated residues from the project site.
- C. All non-disposable equipment and tools employed in the course of the project will be at the conclusion of each work day through the following sequence:
 - 1. Initial tap water rinse, to remove gross debris
 - 2. Tap water and Alconox wash
 - 3. Tap water rinse
 - 4. Second tap water and Alconox wash
 - 5. Second tap water rinse
- D. The wash water and decontamination liquids shall be captured and containerized in 55-gallon barrels for off-site disposal.

3.3 ON-SITE WASTE MANAGEMENT

B. SOLID HAZARDOUS WASTES

- 1. All solid waste material containment system components, used personnel protective equipment, and other solid wastes generated during the work, shall be placed directly in appropriate waste receptacles immediately upon removal from its in-situ position. Suitable waste receptacles may consist of roll-off containers or CTDOT-approved 55-gallon barrels.
- 2. If roll-off containers are to be utilized for containerization of the abatement wastes, the following shall apply:
 - a. All roll off containers or other similar vessels utilized shall be watertight and lined with 6-mil polyethylene sheeting or equivalent Impermeable lining, and equipped with a secured and impermeable cover.
 - b. The impermeable cover shall remain securely in place at all times when material is not being actively placed in the vessels. The contractor shall be responsible for ensuring that the cover remains securely intact until the container is removed from the site.

3. If 55-Gallon barrel are to be utilized for waste containerization, the barrels shall consists of suitable DOT-approved 55-gallon barrels that are watertight and free of corrosion, perforations, punctures, or other damage. All barrels shall be securely covered and sealed at the conclusion of each work day. The waste containers shall remain staged at the site with a secure impermeable cover in place until the materials are transported from the site to be delivered to the designated disposal facility.
4. A waste roll off and barrel staging area shall be designated prior to initiation of the abatement work, and approved by the Owner's Consultant.

B. DECONTAMINATION FLUIDS AND LIQUID WASTE MATERIALS

1. Under no circumstances shall decontamination fluids or liquid wastes be discharged to the ground surface or subsurface at the site.
2. Liquid materials, including equipment or personal decontamination fluids or similar liquids generated during excavation work at the site shall be placed directly into appropriately sized and sealed vessels immediately upon generation.
3. Acceptable vessels for the storage of groundwater or liquid wastes may include DOT approved 55-gallon barrels, steel or polyethylene tanks, fractioning tanks or tank trucks. All proposed vessels shall be compatible with the intended liquid contents.
4. Container staging areas shall be designated prior to initiation of the removal work and approved by the Owner's Consultant.
5. All storage vessels to be used in the containerization and transportation of liquid waste materials shall be free of corrosion, perforations, punctures or other condition that may impair its ability to securely contain liquid.
6. Temporary staging of liquid waste vessels at the site shall be in a manner that will prevent freezing of contained liquids. Should the potential exist for liquid containers to freeze during exterior storage at the site, arrangements shall be made with the Owner's Consultant to identify and utilize an appropriate alternate storage location acceptable to the Owner's Consultant.
7. All liquid storage vessels utilized and staged at the site shall be stored in an area on the property that will not interfere with facility operations or normal flow of vehicle or pedestrian traffic, and in a manner that will minimize the potential for tipping, vandalism or damage by vehicular traffic.

C. LABELING OF WASTE CONTAINERS

1. All waste containers must be labeled with the name of the waste contained; the date in which the first material was placed in the vessel; and the last date at which addition of waste occurred.
2. All waste containers containing caulk or caulk debris, containment system components, used personnel protective equipment, personal and equipment wash water and decontamination fluids, or other wastes generated during the abatement work shall be labeled as follows:

HAZARDOUS WASTE-Federal law prohibits improper disposal.
If found, contact the nearest police or public safety authority or the U.S.
Environmental Protection Agency.

Generator's Name: _____

Manifest Document No.: _____

3. Such marking must be durable, in English and printed on or affixed to the surface of the package or on a label, tag or sign; displayed on a background of sharply contrasting color; unobscured by labels or attachments and located away from any other marking (such as advertising) that could substantially reduce its effectiveness.

3.4 WASTE TRANSPORTATION AND DISPOSAL

- A. All waste packaging, labeling and transportation activities shall be performed in accordance with applicable State of Connecticut and US Department of Transportation Regulations at 49 CFR Parts 171, 172, 173, 177, and 178, and any and all other applicable federal, state and local laws and regulations.
- B. All hazardous wastes shall be shipped using state-specific standard manifest documents. The Contractor shall supply and complete the manifest documents in accordance with all applicable state and federal regulations. All manifest documents shall be signed by a representative of the Owner and appropriate copies shall be provided to the Owner's representative prior to removing the waste from the site.
- C. The Contractor or their designated waste disposal subcontractor providing waste transportation services shall possess a valid Waste Hauler's Permit issued by the State of Connecticut Department of Environmental Protection (CTDEP). In addition, if the waste is to be transported and disposed of out of Connecticut State, applicable permits for those states or territories through which the waste will be transported and for where it will be disposed will be required. It is the responsibility of the Contractor to identify the appropriate disposal facility and associated travel route(s) and to identify the pertinent permits that will be required and to provide copies of the applicable permits to the Owner's Consultant prior to removing the waste from the site.
- D. Refer to Section 02080 Asbestos Removal for additional requirements.

3.5 CERTIFICATION OF ABATEMENT WORK

- A. The Contractor shall certify in writing to the Owner's Consultant that all abatement work and waste disposal has been completed in accordance with this specification and all applicable federal and state regulations.
- B. The Contractor shall certify in writing to the Owner's Consultant that each piece of equipment used in the Abatement zones or which has come in or potential come into contact with contaminated material has been decontaminated prior to removal from the site.

3.6 OWNER'S CONSULTANT POST ABATEMENT CERTIFICATION

- A. At the completion of abatement work, the owner's representative will perform re-occupancy air testing and surface verification wipe sampling, as necessary. Air sampling will be performed at the interior of the structure only. Surface wipes shall be collected in random locations from the interior floor surfaces.
- B. Areas that do not meet the required clearance criteria shall be re-cleaned and or resealed at no additional cost to the owner. Clearance criteria for air samples shall be <300 nanograms per cubic meter. Clearance criteria for wipe sample shall be < 1 $\mu\text{g}/100\text{cm}^2$ on the floor surfaces.

END OF SECTION 02110

APPENDIX F
CONTRACTOR'S HEALTH & SAFETY PLAN (HASP)



SELECTIVE DEMOLITION • ASBESTOS • LEAD • MOLD

**AAIS
Site Specific
Health and Safety Plan
06/07/2011**

PCB Remediation – Window Removal, Interior and Exterior Wall Demolition as PCB - Area III

**General Information
Scope and Application
Worker Protection**

Site Location:

**Bolton High School
72 Brandy Street
Bolton, CT**

AAIS is committed to providing a hazard free workplace, paying strict attention to conditions which may cause personal injury or property damage. To this end the following applies:

Due to the nature of the scope of work for this project, workers will perform assigned tasks in accordance with the AAIS Corp Safety and Health Program and /or the specific sections found in this Addendum.

General Site Information:

The site is a public high school. The affected portion of the building covered by the work is identified as interior and exterior caulk at the joint between the window/door frame, and the interior CMU wall and Exterior brick veneer wall meet.

The area is labeled as area III. This consists of the main office area and the adjoining classrooms to the north of the main office (windows W01 thru W15).

This work will begin on 06/24/2011.

Scope and Application:

The general scope of work for this project will consist of demolition of the entire section of the interior block, and exterior brick/concrete wall. The removal of (CMU, Brick Veneer, Tectum Soffit, Window System and Caulking) as PCB containing materials



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AAIS
Site Specific
Health and Safety Plan
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SELECTIVE DEMOLITION • ASBESTOS • LEAD • MOLD

A negative pressure containment will be constructed along both sides of the exterior wall. The containment will consist of 2, 6-mil layer poly walls on both the interior and the exterior of the building. The exterior poly will be supported by 2x4 wood framing for strength and weather resistance. The dumpsters will be incorporated into the containment for direct loading of the PCB material. The interior and exterior window and door caulks, as well as the associated metal window systems, all metal window frames, and all door frames will be disposed of as PCB Bulk Product Waste without attempting to clean the metal components. All dumpsters will first be lined with 2, 10-mil leak proof poly liners and (1) internal Puncture Resistant Poly-Pro Liner.

All interior CMU walls, and the exterior brick veneer with the associated layer of concrete, soffit caulk will be loaded in the same manner into separate dumpsters and sent out as PCB remediation waste.(PCB containing < 50ppm and > 50ppm) .

Please note that entire work will be performed using a containment procedure for both the interior and exterior work. AAIS Corp. will divide work areas into sections typically to have better control on containment procedure and isolation of the work areas. Interior and exterior of each work area will be contained together to maintain negative pressure even after window walls are removed. The interior work area will be isolated from the rest of the building by solid barriers in the existing school. The exterior will be secured by chain link fence, lined with orange construction fence for the entire time the PCB abatement is being performed. This is shown on the drawing marked Work Area Diagram PCB-1, attached with Eagle application.

The use of minimal quantities of water spray to moisten the generated dust prior to collection shall be utilized. Under no circumstances shall the PCB Remediation Waste show evidence of free liquid water or pooling within the waste stream. Any liquid used to wet the dust and debris to control fugitive emissions shall be collected and disposed of as PCB liquid waste in accordance with 40CFR Part(61,61(a)(5)(iv). All rags and other cleaning materials used to clean shall also be properly disposed of as PCB Remediation Waste. All PCB Remediation Waste shall be stored for disposal in accordance with 40 CFR Part 761.65. All waste containers shall be appropriately labeled in accordance with 40 CFR Part 761.40 and 761.45.

The next phase will consist of removing the remaining CMU, Brick Veneer and Tectum soffit. This task will be achieved by separating the block so it can be removed by hand transported in wheel barrows and put into a lined hazardous waste container. This material will be disposed of as PCB bulk remediation waste (PCB containing < 50 ppm and > 50ppm).

The scope of work as described in Area III includes the removal of exterior windows and soffit covering as well as the removal of all interior CMU walls and exterior brick walls. This was outlined in Eagle Plan Section I, introduction and background and again in Eagle Plan Sections 3.2.1. & 3.2.2.. These



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sections stated that pcb caulk will be removed from all interior and exterior window/door frames, all interior CMU block and all exterior brick/concrete within the 1963 wing at the window wall will be removed.

AAIS Corp. will follow marking requirements as identified in 761.40 and 761.45

Employee Qualifications and Training

Work will be performed as described in the scope of work by qualified, trained and licensed personnel in accordance with all OSHA, EPA, CTDPH and CTDEP requirements. Workers performing PCB abatement have successfully completed 40 Hour Hazwoper training in accordance with 29CFR 1910.120.

AAIS workers are trained a minimum of 10 hour OSHA, and 40 hour HAZWOPER in accordance to OSHA regulations, 29CFR1910, 1926. Site specific training will be conducted on site prior to the start of the project. Licenses, training certifications and qualifications will be submitted prior to start of the project. Work will be performed in accordance with all OSHA, EPA, CTDPH and CTDEP requirements.

Safety Control and Security

AAIS accepts the responsibility to establish and maintain a workplace that is both safe and secure.

To this end, AAIS will maintain a Competent Person (as defined in OSHA 29 CFR Part 1926) on site at all times.

Worker Protection and Contamination Control

Once abatement has begun in the containment, all persons entering the abatement area shall wear as a minimum, a hooded full body protective suit gathered at the wrists and the ankles, protective shoe coverings, and an approved respirator. This level of prescribed protective clothing must be maintained until the final inspection and monitoring deem the containment area to be free of risks. Respirator cartridges for demolition and abatement of PCB containing materials on this project will consist of combination HEPA and organic vapor cartridges. This and other personal protective equipment will be provided free of charge to the employees of AAIS.

AAIS Corp. will follow the marking requirements as identified.



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WARNING
HAZARDOUS WASTE WORK AREA
PCBs-POISON
NO SMOKING, EATING OR DRINKING
AUTHORIZED PERSONNEL ONLY
PROTECTIVE CLOTHING REQUIRED IN THIS AREA

Before leaving the work area each person shall: vacuum or wet wipe any gross contamination from protective clothing, proceed to the Decontamination (Decon) Unit and remove all clothing except respirator. While still wearing the respirator, the worker shall proceed naked to the shower and clean the respirator and self using soap and water and rinse self in the shower. All PPE and waste water shall be disposed of in a receptacle for hazardous waste.

Following showering and drying off, each person shall proceed directly to the Clean (change) Room and dress in street clothes at the end of each days work or before eating or taking a break.

Smoking, drinking, eating, or chew gum or tobacco in the abatement area is strictly prohibited.

Tools / Equipment Decontamination

Tools and small equipment used to perform this project will be swabbed with a non-chlorinated solvent cleaner such as but not limited to: kerosene, diesel fuel, hexane, naptha, terpene, etc. (761.79 approved PODFs) (761.79 decontaminating movable equipment). After cleaning, tools and equipment will be sprayed and wiped with ALCONOX cleaner. Cleaning materials such as rags, etc. will be disposed of in the same containers as the PCB contaminated waste. Waste materials to be disposed will be solids.

Hazardous Material Storage and Disposal

PCB bulk product waste (PCB containing > 50 ppm) will be stored in sealed, poly lined, covered 30 yard waste containers. The containers will be protected from conditions that could cause damage resulting in loss of the containers integrity. PCB remediation waste (PCB containing < 50 ppm and > 50 ppm) will be stored in a covered poly lined 30 yard waste container. Both containers will be inspected daily for containment integrity. Both drums and containers will be labeled in accordance with 40 CFR 761.40, and 761.45 shall be stored in accordance with 40CFR part 761.65.



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The PCB waste material containers will be scheduled to be removed from the site within the thirty day time frame per 40 CFR 761.65. If additional time is required an extension may be applied for in accordance with 40 CFR 761.65.

Waste Hauler EPA Identification number, Red Technologies CT-HW-812

PCB containing materials characterized as PCB remediation waste (< 50 ppm and > 50 ppm) will be disposed of at the Turnkey Landfill in New Hampshire.

PCB containing materials characterized as PCB bulk product waste (>50 ppm) will be disposed of at Wayne Disposal Inc. Site#2 Landfill, 49350 N. I-94 Service Drive, Belleville, MI 48111.

Storage, transportation and disposal will be in accordance with 40 CFR 761.61, 40 CFR 761.62 and 40 CFR 761.65. Signage and labeling will be in accordance with 40 CFR 761.40